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A MARKET FOR U.S. PRODUCTS IN CHILE

A SUPPLEMENT TO

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A Market for U.S. Products in CHILE

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By

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Bureau of International Commerce
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FOREWORD

The obstacles blocking Chile's take-off into sustained growth have also limited U.S. sales there. These obstacles have included inflation, balance-of-payments disequilibrium, and stagnation in some production sectors. They have been compounded by the earthquakes, fire, and floods which devastated one-fourth of Chile in 1960 and by the only slightly less catastrophic earthquakes and floods there in 1965.

Chile is beginning to overcome these obstacles. It is committed under the Alliance for Progress to carry out reforms which will help the average Chilean participate in the fruits of economic growth. In support of this commitment the United States has extended $121 million annually in official assistance to Chile since 1961.

Recent developments definitely signal major improvement in the over-all outlook for sustained expansion of U.S.-Chilean trade. For example, Chile is moving toward implementing its agreements with three U.S. companies on large-scale investments in copper mining. Other projects are underway or in advanced stages of planning. As a result, imports of capital goods and raw materials are increasing and U.S. exporters are expanding their activities in the Chilean market. During the first half of 1966, U.S. exports increased an impressive 32 percent over the same period in 1965. The strong demand for U.S. products in Chile should continue in view of Chile's increasing foreign exchange receipts resulting from favorable world prices for her principal export, copper, and from important assistance by U.S. and international lending agencies.

Opportunities for U.S. industry will be lost unless sales efforts are vigorously undertaken. Foreign competition is strong. Import and exchange restrictions are still a factor to be taken into account. Taken together—the opportunities, the challenges, the problems—the current outlook for expansion of U.S. exports to Chile warrants U.S. firms making significant new and sustained commitments to obtain new markets.

LAWRENCE A. FOX
Director, Bureau of International Commerce

November 1966

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Photographs come from various sources, including the Anaconda Company, Chilean Development Corporation (Corporación de Fomento—CORFO), Grace Line, Inter-American Development Bank (IDB), International Bank for Reconstruction and Development (IBRD), Pan American Union and United Nations.

Abbreviations Used in This Study

ADELA—Atlantic Community Development Group for Latin America

AID—Agency for International Development (United States)

AMFORP—American and Foreign Power Company

ARCHI—Radio Broadcasting Association of Chile

ASMAR—Chilean Navy Dockyard (Astilleros y Maestranzas de la Armada)

ASIMET—Metallurgical Industries Association (Asociación de Industrias Metalurgicas)

BDSA—Business and Defense Administration

CAP—Pacific Steel Company (Compañía de Acero del Pacífico)

CAT—Government Advisory Commission for Transport (Comisión Asesora de Transportes)

CHILECTRA—Chilean Electric Company (Compañía Chilena de Electricidad)

COPEC—Chilean Petroleum Company (Compañía de Petróleos de Chile)

CORFO—Chilean Development Corporation (Corporación de Fomento de la Producción)

COVENSA—Chilean Nitrate Sales Corporation (Compañía de Venta de Salitre y Yodo, S.A.)

CSAV—South American Steamship Company Compañía Sud Americana de Vapores)

ECA—Agricultural Marketing Enterprise (Empresa de Comercio Agrícola)

EMPREMAR—State Maritime Enterprise (Empresa Marítima del Estado)

ENAMI—National Mining Enterprise (Empresa Nacional de Minería)

ENAP—National Petroleum Enterprise (Empresa Nacional de Petróleo)

ENDESA—National Electric Enterprise (Empresa Nacional de Electricidad)

ENTEL—National Telecommunications Enterprise (Empresa Nacional de Telecommunicaciones)

EXIMBANK—Export-Import Bank of Washington

FCIA—Foreign Credit Insurance Association

FSO—Fund for Special Operations

GATT—General Agreement on Tariffs and Trade

GDP—Gross Domestic Product

GULFSA—Gulf & South American Steamship Co., Inc.

IATA—International Air-Transport Association

IOGA—Industry-Organized Government-Approved Trade Missions

IBRD—International Bank for Reconstruction and Development (World Bank)

IDA—International Development Association

IDB—Inter-American Development Bank

IFC—International Finance Corporation

IMF—International Monetary Fund

INSA—National Tire Corporation (Industria Nacional de Neumáticos, S.A.)

ITT—International Telephone and Telegraph Company

LAFTA—Latin American Free Trade Association

LAN—Chilean National Airline (Línea Aérea Nacional)

NASA—National Aeronautics and Space Administration

OAS—Organization of American States

ODEPLAN—Chilean National Planning Office (Oficina de Planificación Nacional)

PL-480—Public Law 480 (United States)

SPTF—Social Progress Trust Fund

USIA—United States Information Agency

Market Profile—Chile

Foreign Trade

Imports—Total (projected) 1966: $743 million. Total (preliminary data) 1965: $604 million. Major suppliers in 1965 in percent of total: United States, 37; all LAFTA[1] countries, 20; Federal Republic of Germany, 10; Argentina, 8; United Kingdom, 6; Peru, 4; and Brazil, 3. Major imports: machinery, electrical equipment, chemicals and related products, petroleum products, transportation equipment, various industrial manufactures, cereals, textile raw materials, and live animals.

Exports—Total (projected) 1966: $741 million. Total (preliminary data) 1965: $688 million. Major markets in 1965 in percent of total: United States, 31; Federal Republic of Germany, 13; United Kingdom, 11; Japan, 11; the Netherlands, 11; and all LAFTA countries, 7. Major commodities: copper (65 percent of all exports), iron ore, nitrates, molybdenum, fishmeal and fish oil, fruits and vegetables, and paper.

Commercial Policy—Prohibitions or severe restrictions on less essential goods and items made in Chile; Government severely limits importation of capital goods when credit terms extend less than 8 years. Import priorities based on requirements of development plan—particularly for development of industries for export, import substitution, and basic consumer goods. Capital goods encouraged.

Trade Prospects—Imports should increase in 1966 if plans for investments in the copper-mining industry are carried out. Mining machinery to be purchased in the United States. Investments also planned for several other industries, including petrochemicals, steel, wood pulp, transportation, and electric power. Large-scale economic assistance will stimulate Chilean imports from the United States, but credit requirements and European and LAFTA competition pose difficulties.

Foreign Investment

The U.S. direct investment estimated at $829 million (book value) at the end of 1965, 61.3 percent in mining and smelting and most of the remainder in utilities. Other foreign investments may total $300 million. The Agency for International Development (AID) investment guaranty agreement covers convertibility, war risks, revolution, insurrection, and expropriation.

Investment Prospects—Official policies encourage foreign investment, especially in development of raw materials and manufactures for export. Political stability, abundant resources, and developed transportation power and communications facilities have created favorable conditions for foreign capital. Limited market and chronic economic problems, however, have inhibited investment.

Finance

Currency—Escudo. On November 1, 1966, the bankers spot rate was 4.31 escudos per dollar, the bankers futures (trade transactions) rate was 4.32 and the brokers (capital and tourist transactions) was 4.15.

Domestic Credit—Credit hard to obtain.

Domestic Investment—Gross rate of investment, 13 percent of gross domestic product (GDP) in 1964. Need for increased savings and private sector investments to achieve balanced growth.

National Budget—Past deficits, for which an insufficient tax base is partly responsible, have contributed to inflation. Major steps have been taken to match expenditures with resources by development of more efficient budget techniques and tax reform.

Balance of Payments—Deficits on current account financed by substantial inflow of foreign assistance following a severe exchange crisis at end of 1961. Substantial improvement in current account in 1964 and 1965. Export surplus in 1965, primarily the result of increased production and higher prices for copper. Pressure eased by renegotiation of 70 percent of medium- and short-term debt falling due in 1965-66. Exchange reserves remain low.

Foreign Assistance—$618 million in commitments of U.S. loans and grants for 1961-65, of which $324 million by AID assistance (primarily program-type loans), $99 million by Export-Import Bank of Washington, Washington, D.C. (Eximbank), and $101 million by Public Law-480. Commitments for 1966 include: $50 million not previously disbursed, $80 million program loan, and $10 million capital goods project loan. Other loan assistance may be negotiated. Nearly all U.S. assistance must be used for purchase of U.S. commodities. Chile also receives substantial assistance from international agencies, such as the International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD), and Inter-American Development Bank (IBD). Other countries are beginning to provide development assistance, including West Germany, France, Spain and Italy.

[1] The Latin American Free Trade Association (LAFTA) includes Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay. Venezuela formally became a member on July 12, 1966.

Economy

Chile ranks among the more economically developed Latin American countries. Average annual increase in GDP since 1959, 4.4 percent; in per capita income, 0.9 percent. Chief GDP components (1964), in percent: manufacturing, 19; commerce, 23; public and private services, 19; agriculture, 10; mining, the major export sector, 6. Among obstacles to economic development are chronic inflation, low rate of investment, balance-of-payments deficits, and limited domestic markets.

Agriculture—Pending agrarian reform law a key economic measure.

Main products: wheat, barley, oats, rye, potatoes, sugar beets, rice, corn, beans, lentils, chickpeas, onions, garlic.

Industry—Foodstuffs, textiles, fish products, pulp and paper, copper refining, iron and steel, petroleum products, automobile assembly, chemicals, and many other products.

Mining—A leading exporter of copper, crude iodine, and natural nitrates. Other important minerals are iron ore, coal, petroleum, molybdenum, and various chemical materials.

Basic Economic Facilities

Transportation—5,200 miles of Government railroads provide public services; 1,200 miles of private railroads generally serve specific industries. Major highway construction. Adequate air travel and port facilities.

Communications—Satisfactory telegraph and radiotelephone service, both domestic and international; telephone service insufficient, but expansion planned.

Power—Chile leads South America in per capita electrical energy consumption. Total installed capacity at the end of 1964 was 1.49 million kilowatts (kw.). A major expansion program is underway.

Natural Resources

Land—Area, 286,396 square miles—slightly smaller than California, Oregon, and Washington states combined; seventh largest Latin American country.

Climate—Varies from the hot, subtropical Atacama Desert in the north (driest in the world) to the frigid islands in the south near the Antarctic; central area in temperate zone.

Minerals—Rich mineral resources.

Forestry—Extensive temperate forests. Insignis pine for pulp is most important species.

Fisheries—Rich fishing grounds.

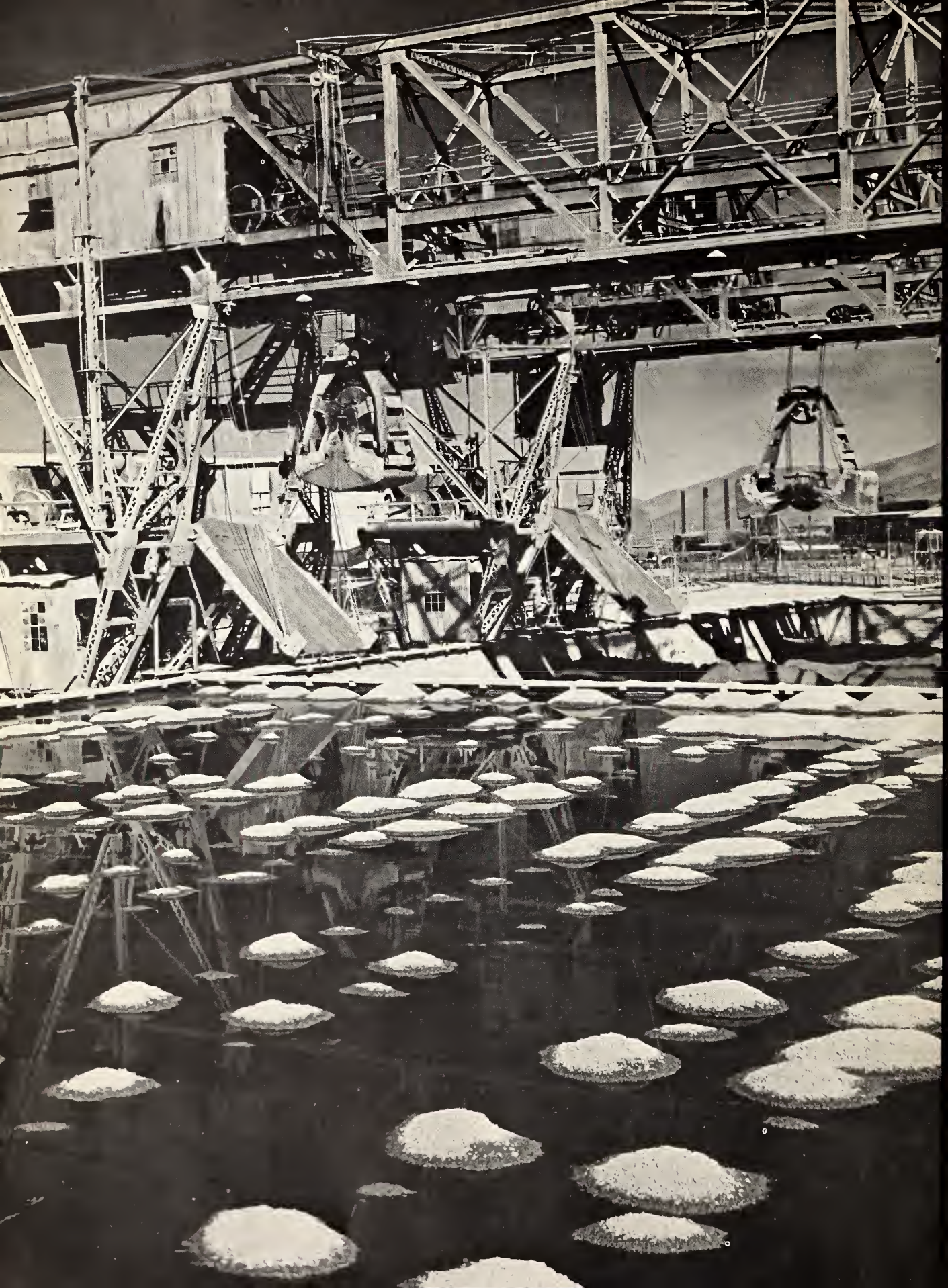
People

Population—8.9 million, 2.43 percent annual growth rate. Population mainly urban and concentrated in central Chile.

Language—Spanish.

Education—Literacy rate, 84 percent, one of highest in Latin America.

Labor—Active labor force 2,356,000 in 1962, as follows, in percent of total: agriculture, 27; manufacturing, 17; service industries, 24; commerce, 10; construction, 7; mining, transportation, communications, and other, 15.



CHAPTER I

Market Outlook

The demand in Chile for imported goods may increase because of: (1) Substantial progress in implementing plans for large-scale investments in copper mining by three large U.S. companies; (2) an improvement in the country's balance-of-payments position; (3) favorable prices for Chile's principal export, copper; (4) continued assurances that Chile should receive substantial economic assistance from international lending institutions, the United States, and some European countries; (5) limited but significant successes of the current Chilean Government in carrying out its program of economic stabilization and structural reforms; and (6) a reassessment of Chile by foreign investors.

SIZE AND COMPOSITION OF MARKET

Chile ranks after Mexico, Venezuela, Brazil, Argentina, and Peru as the sixth largest import market in Latin America. Imports have totaled $500 million or more every year since 1960 and have exceeded $600 million in three of those years. Preliminary customs data show total imports of $604 million in 1965. Imports should rise 22 percent in 1966 and 19 percent in 1967, according to Chilean planners, and then level off to an annual average of $833 million for the years 1968-70. Table 1 shows balance-of-payments estimates of total imports for the years 1961-65 and projections for 1966-70. The projections apparently reflect Chilean estimates of import requirements necessary to sustain targeted annual growth rates in real gross domestic product (GDP) of 5 percent during 1965-67 and 6 percent during 1968-70. Prompt action on copper investment plans and a general upswing in domestic and foreign investment will be required to attain these import levels.

Table 1 also shows the large extent to which Chilean imports are composed of both capital goods (including most transportation equipment) and raw materials. Table 2 shows in greater detail, for 1964-66, the commodities making up the major import categories of Table 1. Particularly striking is the fact that consumer goods usually constitute such a small part of the total, with agricultural food products accounting for a very large portion of consumer imports. This fact reflects Chile's success, beginning in the 1930's, in promoting industries based on import substitution for the major types of consumer goods and the failure of Chilean agriculture to keep pace with the growth in population and rising living standards. Customs barriers effectively bar imports of consumer goods for which domestic production is considered adequate. Luxury imports are prohibited outright, and customs charges for less essential consumer goods are often prohibitively high. A limited quantity of imports still enter for use in free port areas, but restrictions have increased even there in recent years. See Chapter VI for a description of Chilean import regulations and policy.

While the expansion of Chilean industry has also resulted in the substitution of a considerable volume of domestically produced intermediate raw materials for imported products, the overall effect has been to increase the volume of raw material imports. This is true even with the exclusion from total imports of crude agricultural products (mostly foodstuffs), which account for about half of all raw material imports.

COPPER MINING: Copper leaching tanks are used to separate copper salts from the ore.

Capital goods imports, 1966-70, are expected to increase. Equipment for the expansion of copper production is expected to account for a large part of the increase, particularly in 1966-68. These copper investments should also generate increased investment activity in other fields that will stimulate imports. Imports will be required for Chilean Government projects in petrochemicals and power. Chapter II, Basic Data and Chapter III, Commodity Analysis discusses plans by the private and public sectors; these plans are expected to generate increased demand for imports.

Data on the composition of Chilean imports are contained in Table 1, Appendix D, Chilean Imports by Sections and Commodity Groups, Total and From Principal Suppliers, 1961-64, and in Chapter III, Tables 3 through 14 under the general title of Imports by Commodity Groups and Principal Commodities, Total and From the United States, 1964.

FINANCING THE EXPANSION

The successful financing of the Chilean development program, supported by an increased level of imports, will require careful coordination of both Chilean and foreign financial resources. Under ideal conditions, the largest foreign contribution will come during the early years of the program while Chilean efforts are devoted to maximizing existing productive capacity, preparing new projects, and carrying out the structural and administrative reforms to employ available resources. The greatest increase in Chile's contribution to financing the expansion is expected to come in the late 1960's and early 1970's when increased output from copper and other projects should produce a substantial rise in foreign exchange earnings.

Chile's development efforts depend on the prompt execution of investments in 1966-71 totaling $420

Table 1.—Estimated and Projected Imports by Major Import Categories, 1961-70
[Millions of dollars]

Import	Actual				Projected					
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Capital goods	262	220	214	262	240	310	450	410	430	440
Fuels and raw materials	224	199	244	259	256	290	279	288	292	263
Consumer goods	103	91	99	87	95	114	118	109	92	91
Unregistered imports	30	32	28	16	20	30	35	30	25	25
Total	[1]619	[1]541	[1]586	625	611	743	882	837	839	819

[1] These data reflect an adjustment in customs data by the Central Bank for 1963. The 1963 customs data show a total of $637 million, and include imports that actually entered Chile during the two previous years.

Source: National Planning Office estimates for 1961-63, and projections from the Development Plan for 1967-70.

Notes: Detail may not add to totals because of rounding. These are balance-of-payments data. They differ from customs data used in other trade tables in this report because of adjustments for contraband imports, special imports, certain vessels, and donated merchandise, all of which are excluded from customs data. The data for 1964-66 summarize those given in detail in text table 2.

Table 2.—Imports by Leading Commodities, 1964-66
[Millions of dollars]

Import	1964	1965[1]	1966[2]
Capital goods and their spares	262	240	310
Fuels	27	27	48
Coal and unrefined petroleum	24	23	44
Gasoline	3	4	4
Raw materials	232	229	242
Agricultural products	120	113	116
Live animals	28	12	20
Cereals	20	27	31
Wheat	17	20	26
Corn	0	4	3
Rice	4	4	3
Edible oils	5	6	4
Textile raw materials	20	21	22
Sugar and derivatives	29	18	18
Other	20	20	21
Nonagricultural products	112	116	125
Textiles	3	4	4
Chemical and industrial products	30	30	33
Pharmaceutical products	5	6	6
Artificial fertilizers	10	13	14
Pesticides and herbicides	3	3	4
Fats, oils, and resins	14	14	15
Iron and steel	10	10	11
Other	35	36	39
Metals	7	7	8
Nonmetallic minerals	4	4	4
Yarn	2	3	3
Bags	4	4	4
Other textiles	2	2	2
Explosives	2	2	2
Paints and varnishes	7	7	7
Cement	3	3	3
Paper	4	4	4
Other, n.e.s.	2	3	3
Consumer goods	87	95	114
Agricultural products	38	44	47
Fruits	4	3	3
Vegetables	14	16	16
Meats, fats, and dried beef	11	13	13
Milk and derivatives	5	7	8
Flour and starch	3	5	5
Other	1	1	1
Nonagricultural products	49	51	54
Apparel	4	3	3
Pharmaceutical products	4	4	5
Iron fixtures	4	4	4
Vehicles and parts	10	14	14
Rubber and plastic manufactures	3	3	3
Printed matter and engravings	5	5	6
Electrical articles, musical instruments, etc.	4	4	4
Other	7	6	6
Noncommercial imports	9	9	9
Consumer durables for popular use	0	0	13
Nonregistered imports	16	20	30
Merchandise imports, total	625	611	743

[1] Preliminary. [2] Projected.

Source: Banco Central de Chile, *Boletin Mensual No. 455*, Santiago, January 1966, based on data prepared by the National Planning Office (ODEPLAN) and the Central Bank.

Notes: Detail may not add to totals because of rounding. These are balance-of-payments data. They differ from customs data used in other trade tables in this report because of adjustments for contraband imports, special imports, certain vessels, and donated merchandise, all of which are excluded from customs figures.

N.e.s.—not elsewhere specified.

million in copper mining. The earnings to be returned to Chile by these investments will be required to sustain the impulse to growth generated by the copper expansion. (See Chapter II for a discussion of the copper investment plans.) This expectation of future earnings places in perspective the large-scale governmental and international economic assistance now being extended to Chile. The deferral by European and American creditors of 70 percent of Chile's short- and medium-term debt falling due in 1965 and 1966, and the development and financial assistance described in succeeding sections of this chapter are part of the strategy designed to help Chile through the difficult period before current projects pay off.

Chile has experienced a substantial increase in current foreign exchange earnings as the result of favorable prices for its principal export, copper. The Government has set priorities for the use of these unanticipated earnings from higher 1966 prices which include: (1) The recouping of losses from copper mining strikes at the end of 1965 and the beginning of 1966: (2) the reduction of Chile's short-term debt; (3) the financing of the Chilean Government's commitment to the joint Government-private copper corporations which are to execute the copper expansion: (4) the supply of essential imported consumer goods, if necessary to meet the target of holding the rise in the cost of living to 15 percent in 1966: and (5) the increase in the supply of imported capital goods to the private sector, particularly in support of diversification.

Meanwhile, Chilean planners are revising the 1961-70 development program, placing increased emphasis on sectorial and project planning (see Chapter II). Many of these projects, when the plans are made, will require the importation of goods and services, and foreign lending institutions are expected to be receptive to requests for financing properly drawn proposals. Chile is also carrying out structural and administrative reforms in taxation, budgeting, agricultural reform, education, and economic stabilization. These reforms should help the country utilize most advantageously its available resources.

U.S. Assistance

United States assistance to Chile in support of that country's development efforts has played and will continue to play an extremely important part in financing U.S. exports to Chile. Some form of assistance has been provided since the latter part of World War II. But the greatest flow of assistance began in 1961 and has continued. Thus, total U.S. disbursements in Chile averaged $121 million annually during the years 1961-65, making Chile the largest per capita recipient of U.S. assistance in Latin America. Only U.S. assistance to Brazil in the region exceeds that for Chile in absolute terms. Table 4, Appendix D provides a breakdown of the amounts and sources of U.S. assistance to Chile for the years 1961-65. The Agency for International Development (AID) within the U.S. Department of State administers the U.S. economic assistance program in Chile. The major forms of U.S. assistance to Chile as they affect U.S. exports are the program loan, project loan, Food for Peace Program, and Export-Import Bank of Washington (Eximbank) loans.

Program Loan

The largest part of United States assistance to Chile has been in the form of program-type loans. Such loans have both a foreign-exchange component and a local-currency counterpart. The foreign exchange component finances a broad range of commercial imports selected by the Chilean Government from a list of goods deemed essential to the Chilean development program. The local-currency counterpart consists of the Chilean escudos paid to the Chilean Central Bank by importers in exchange for foreign currency which is remitted to suppliers. The Chilean Government invests the local currency so obtained in financing the local costs of development projects. Such projects are selected in consulation with AID. The first loan of this type was the emergency $100-million Earthquake and Reconstruction Loan authorized by the U.S. Congress in 1961 in the wake of a devastating earthquake, fire, and flood in 1960. A similar loan for $40 million was made to the Chilean Development Corporation (CORFO) in 1962 to finance a series of projects. Annual program loans amounting to 35-, 55-, 80-, and 80 millions of dollars were authorized for the years 1963-66, respectively. Program loans must be used for the purchase of U.S. goods.

Under the program loans, special conditions in Chile have led to the use of three different procedures for facilitating the importation of U.S. goods: standard financing, alternate financing, and capital goods incentives.

Standard financing procedure. Used in most of the countries where the U.S. has made program loans, the standard financing procedure, from the exporter's point of view, is characterized by prior notice that an import is to be AID-financed and a guarantee of prompt payment. The procedure has been used for relatively small direct importations of capital equipment by the public sector with funds reserved for that purpose under the program loans of 1963-66.

Alternate financing procedure. Chile has used the alternate financing procedure to finance the bulk of imports made under program loans through 1965.

Most of these imports were made by importers in the private sector. The U.S. supplier ordinarily does not know prior to shipment if his transaction is to be selected for AID-financing since the Chilean Central Bank does not make the selection until after the arrival of the goods in Chile.[1] For that reason, the Central Bank requires that all U.S. shipments be provided with the proper AID documentation.[2] This requirement insures that all imports eligible for importation under the program loan will be available for selection by the Central Bank for AID financing. Imports under the alternate financing procedure are subject to the regular Chilean customs charges and other requirements. Imports financed by medium- and long-term credits are not eligible for importation under a program loan.

Capital goods incentives procedure. Regulations established by Chilean Central Bank Circular 497 of June 8, 1965 (Banco Central de Chile, *Boletin Mensual No. 449* of July 1965), provide a strong incentive for the importation under program loans of U.S. capital goods, equipment, machinery, and vehicles for production or public transport. Such goods, when selected by the Central Bank, are exempted from certain import surcharges and prior deposit requirements (See Chapter VI: Trade Regulations and Practices).[3] United States exporters are informed by customers prior to shipment that their order is to be AID-financed and that dollar payment will be made by an irrevocable letter of credit issued by a Chilean commercial bank and will be backed by a reimbursement authorization issued by the Central Bank against the AID credit. The Chilean importer has 15 days after the approval of his import registration by the Central Bank in which to open this letter of credit. At that time he must pay the full price of the import in local currency. Substantial portions of the 1965 and 1966 loans have been disbursed on this basis.

United States goods enjoy an estimated average 30-percent reduction in their total landed costs when selected for importation under the capital goods incentives procedure. An importer may find this procedure an attractive alternative to importing capital goods on extended credit terms since the Central Bank must require hard-to-obtain, lengthy credit terms, often in excess of 8 years, because of recent debt negotiations. With the exception of certain technicalities, the procedure is very similar to that in standard financing.

Project Loans

AID has the authority to make loans in dollars to private and public enterprises, both U.S. and Chilean. Its policy is to make dollar loans only for those projects for which adequate financing from other free-world sources is not available on reasonable terms. Proceeds from these loans are used to purchase equipment and services from the United States under the standard financing procedure.

The Chilean Government is very active in the preparation of development plans. Many of its agencies are involved in the drawing up of plans for individual, detailed projects. As more of these plans are completed, more U.S. assistance will go to financing their foreign-exchange costs. AID project loans are now promoting rural electrification and the construction of airports and seaports. These loans have provided seed capital for both a cooperative development bank and a savings and loan system. The savings and loan system promotes the construction of low-cost housing. AID has also made a $3-million loan to finance the feasibility studies of projects which may later be eligible for project loans. Some of the proposals now being considered for a planned $110-$120 million petrochemical industry grew out of feasibility studies. AID may eventually provide assistance to the establishment of Chilean development banks.

A special 40-year project loan to the Central Bank designed to finance $10 million in imports of capital equipment from the United States was concluded in early 1966. Priority in the granting of subloans is to be given to imports which promote export activities, agriculture, agricultural processing, and small- and medium-sized mining enterprises. Tractors, agricultural and food-processing machinery and equipment, and textile equipment are eligible for importation. The Central Bank will extend local currency credits to individual importers or manufacturers through the commercial banks, CORFO, the State Bank (a state savings institution), the National Mining Enterprise (ENAMI), and other private or public intermediate lending institutions. The commercial risk will be assumed by these financial institutions. The terms of the subloans will be based primarily on the life of the selected equipment and other usual commercial considerations. This loan is very similar to the $15 million one to Chile by the Eximbank in 1964.

Another loan of $3.6 million was made in 1965 for financing the importation of phosphate fertilizers in 1965 and 1966.

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[1] The Central Bank makes the selection after shipment and prior to the end of the mandatory waiting period for payment, now 80 days from the date of the bill of lading.

[2] See Chapter VI, Trade Regulations and Practices for information on AID documentation requirements.

[3] The Central Bank is granting such privileges under regulations governing the importation of goods on extended credit terms (cobertura diferida). Although such program-loan imports are paid for immediately, the U.S. loan financing the purchases is on 40-year terms.

PULP AND PAPER TOWN: Laja, Chile, pulp and paper mill that was improved with the aid of a loan from the Inter-American Development Bank. The bank loan totaled $17.4 million out of a total $38.2 million pulp and paper project. Other sources of money were the International Finance Corporation, the Canadian Export Credit Insurance Corporation, and the company itself (Compania Manufacturera de Papeles y Cartones, S.A.).

Food for Peace Program

United States sales of agricultural products to Chile in recent years have been supported in large part by the Food for Peace Program administered by the U.S. Department of Agriculture under U.S. Public Law 480 (PL-480). The PL-480 (Title I) loan agreement concluded in July 1965 called for the importation of $20 million worth of U.S. wheat, corn, butter, nonfat dry milk, and tobacco in 1965.

Most of the local currency proceeds from the sale of PL-480 commodities by the Chilean Government are used to finance the local costs of projects in the Chilean Government's development program. However, the 1965 Title I agreement sets aside about 12 million escudos—roughly equivalent to $2.7 million at the current brokers exchange rate—for loans to U.S. firms and their affiliates for local investment costs in Chile or to Chilean or U.S. firms for projects which expand the market for U.S. agricultural products. These are the so-called Cooley loan funds which must be used only for local costs. While they provide no direct stimulus for imports, their availability may help to attract U.S. capital which will be used to import U.S. goods.

In extending Cooley loans, AID will give preference to projects which lead either to increased exports or to the production of items which can be substituted for certain types of imports. Such projects would involve the construction or purchase of fixed assets in Chile, such as land, buildings, machinery or equipment of Chilean origin. No loans are made to support the manufacture of products that would be exported to the United States in competition with products manufactured in the United States, or for the production of commodities to be marketed in competition with U.S. agricultural commodities. Loan applications may be made to the Agency for International Development, Washington, D.C., or to the U.S.-AID Mission, c/o the American Embassy, Santiago, Chile.

Eximbank

The Eximbank is a primary source for the financing of U.S. capital goods exports to Chile. United States exports of all types of goods are also assisted by the bank's guarantee and insurance program in conjunction with the Foreign Credit Insurance Association described in Chapter V: Marketing Aids. Total loans

granted to Chile since 1951 for the financing of imports from the United States are nearing the $400 million mark.

The largest loans in the past have been made for the purchase of equipment for the steel, copper mining, electric power generating, railway, nitrate and iron ore mining industries. It has also financed general capital goods imports and provided a reconstruction credit following the 1960 earthquake. Eximbank made Chile the following loans in 1964: $15 million to the Central Bank for relending to commercial banks for the purchase of capital goods, $11.3 million for the expansion of steel producing facilities, $2.2 million for textile machinery, and $2.8 million for sawmill equipment. The most recent credit was one for $3.6 million in 1965 for the production of calculating machine card stock. The Eximbank is expected to make the major contribution to financing of equipment imports for the planned expansion of the copper mining industry.

International Lending

Inter-American Development Bank

The organization and objectives of the Inter-American Development Bank (IDB) are discussed in Chapter V: Marketing Aids. The lending resources of the IDB consist of three separate funds from which substantial loans have been made to Chile, most of which have financed a considerable volume of imports into Chile. These funds are discussed separately below.

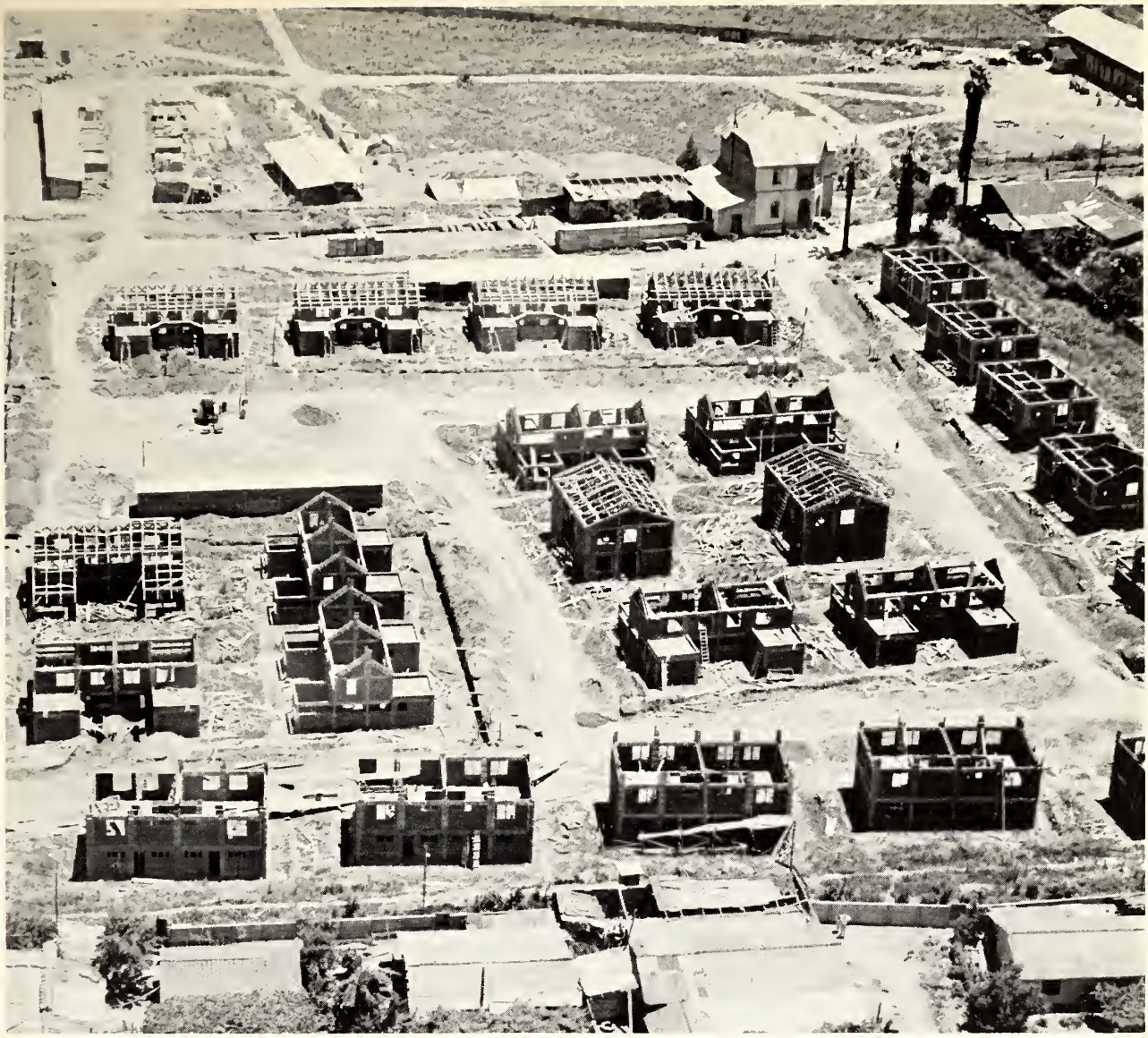
Social Progress Trust Fund. Loans totaling the equivalent of $35.4 million were made from the Social Progress Trust Fund (SPTF) to Chilean private and public entities on very favorable terms during the years 1961-65. Most of these loans were in dollars, but a small amount was in Chilean currency. The equivalent of $13.5 million remained undisbursed from these loans at the end of 1965. The proceeds from these loans have been used primarily to finance local costs of development projects. Goods and services imported for these projects must be purchased in the United States or from other member countries of the IDB if authorized by the bank as being advantageous to the borrower. About one-half of the value of the 1961-65 loans has been used for urban and rural housing, while one-fourth has gone for improving agricultural credit and land use. Loans for improved water supply, higher education, and improved food marketing have accounted for the remainder. Loans were approved in 1965 for housing ($2 million) and improved land use ($1.5 million). Since the resources of the SPTF are nearly exhausted, most lending in the future for such projects will be from the Fund for Special Operations.

Ordinary Capital Resources. Loans totaling the equivalent of $68.5 million have been made from the Ordinary Capital Resources fund to Chile during 1961-65. The value of loans to Chile remaining undisbursed at the end of 1965 was the equivalent of $21.3 million. While most of these loans have been made in dollars, some portions have been in other hard currencies and in Chilean escudos. Procurement of goods and services is carried out by worldwide competitive bidding.

The promotion of medium and small industrial enterprises by the Chilean Development Corporation has been supported by loans totaling $20 million. An $8 million loan was authorized in late 1965 and is included in this total. Seventy percent of this $8 million loan will be channeled into lumber and metalworking enterprises to expand the production of veneers, prefabricated houses, plywood, chipboard, metal fixtures, die molds, electrical equipment, certain capital goods, and consumer durables. The remaining 30 percent will be allocated to the construction, chemical, food-processing, and fishing industries.

Loans have also been made for the construction or expansion of oil refining ($11 million), pulp producing ($17.4 million), fishing ($5 million), water supply ($6.2 million), and irrigation ($7.3 million). In addition, a loan of $2 million was made to promote export sales of Chilean capital goods through a Chilean export credit guarantee program.

Fund for Special Operations. The equivalent of $28.3 million in loans was made to Chile from the Fund for Special Operations (FSO), during 1961-65, of which $23.3 million had not yet been disbursed at the end of that period. The most recent loan, concluded in 1966, helps expand the educational facilities of the Universidad Tecnica Federico Santa Maria in Valparaiso. In late 1965, loans were authorized to help provide adequate water systems for 39 Chilean cities and towns ($15.5 million), to finance preinvestment studies ($3 million), and to aid in housing construction ($1.2 million). Earlier loans included one for technical assistance to the Agrarian Reform Corporation ($0.3 million), one for farm settlement ($6.3 million) and another for an aerial photogrammetric survey ($2.1 million). Portions of some of these loans have been made in local Chilean currency. The FSO took over many of the lending responsibilities of the SPTF after the United States enlarged its FSO subscription in May 31, 1965. As a result FSO is expected to increase substantially its lending activities. Goods and services under such loans may be obtained in the United States, in the borrowing country, or in other member countries of the IDB if the bank authorizes such transactions as being advantageous to the borrower.



HOUSING DEVELOPMENT: Providing loans for projects such as this housing development in southern Chile is a function of the Inter-American Development Bank.

World Bank Group

The World Bank group consists of three international financial institutions: International Bank for Reconstruction and Development (IBRD or World Bank), the International Development Association (IDA), and the International Finance Corporation (IFC). Procurement under loans made by these institutions is effected by bids made by suppliers in member countries and Switzerland. The organization and objectives of these institutions are discussed in Chapter V: Marketing Aids.

IBRD. As of June 30, 1965, the IBRD had made loans to Chile totaling $136.2 million and had $46.6 million undisbursed. Its most recent loan to Chile was one of $4.4 million to the National Electric Enterprise (ENDESA) and CORFO to increase the electric power supply in three widely separated areas. Earlier power loans to Chile totaled $61 million. Other loans have been made in support of agriculture ($27.4 million), coal mining ($21.8 million), paper manufacturing ($20 million), and road maintenance ($6 million). Officials of the bank also participated in a 1965 study of measures to make the Chilean capital market a more efficient instrument in mobilizing domestic capital.

IDA. One development loan, a $19 million credit for road construction, has been made to Chile by the IDA. As of June 30, 1965, $13.6 million was undisbursed.

IFC. Operational investments in Chile by the IFC are valued at $9.1 million. These loans were used to increase the production of cement, paper, and pasta products.

International Monetary Fund

While the International Monetary Fund (IMF) does not provide direct financial development assistance to countries, it does help countries overcome the short-run effects of balance-of-payments problems. For example, the $40-million standby credit extended to Chile in April 1966 is the most recent in a series of such credits to Chile.

U.S. SALES

Chile ranks after Mexico, Venezuela, Brazil, Peru, and Argentina in value of U.S. exports to Latin America. United States sales to Chile could conceivably surpass those to Argentina, and perhaps also to Peru, in the not-too-distant future. Table 3, Appendix D, United States Exports to Chile by Commodity Sections and Principal Commodity Groups, 1964-65, shows that U.S. exports to Chile jumped from $180 million in 1964 to $235 million in 1965. The United States enjoyed an improvement in its share of the market in 1965. Imports from the U.S. totaled $237 million, or 39 percent of Chile's total imports of $604 million, compared with 37 percent of the $607 million total in 1964. This represents a reversal of the recent trend, since the U.S. share of the Chilean import market had declined steadily from 53 percent in 1959 to a post-war low of 35 percent in 1963. The past decline in the U.S. share of the market appears to result in part from import substitution in certain agricultural products and raw materials, such as petroleum, which were previously supplied mainly by the United States and in part from increased price and credit competition from European and Japanese suppliers.

Machinery and transport equipment accounted for 50.9 percent ($119.7 million) of all U.S. exports to Chile in 1965. Transport equipment represented one-fourth of sales in that category. Exports of other manufactured goods (goods not included in other tariff groups) accounted for another 17.6 percent of U.S. exports to Chile while chemicals represented a little under 12 percent. Sales of food and live animals, mostly financed under PL-480, made up another 10 percent of total sales. Exports of beverages and tobacco, crude materials, fuels and lubricants, animal and vegetable oils and fats, and miscellaneous commodities make up the remaining 10 percent of the total. The pattern of U.S. sales in 1964 was not significantly different from that for 1965.

COMPETITION

The most dramatic change in the competitive picture in recent years has been the increasing volume of sales to Chile by countries within the Latin American Free Trade Association (LAFTA).[4] Such sales represented 21.2 percent of total Chilean imports in 1964 and 20.3 percent in 1965, compared with 16.0 percent in 1961. In 1962, the first reduction of trade barriers between LAFTA member countries took place. The greatest gains in sales to the Chilean market by LAFTA members have been made by Mexico and Argentina. The latter is Chile's third largest supplier and traditional leading Latin American trading partner. Peru edged ahead of France in 1964 to become Chile's fifth largest supplier (4.0 percent of all imports in 1965) as the result of increased cotton sales. Most of the increase has been in LAFTA sales of agricultural food products and crude materials, but there has also been a significant surge in sales of manufactured products, particularly machine tools and office equipment by countries such as Brazil and Argentina. Table 2, Appendix D shows Chilean trade by geographic areas and with principal countries, 1961-64.

Western Europe, however, continues to present the sharpest competition in the Chilean market for machinery and transport equipment, chemicals, and other manufactures. Sales from Western Europe reached a peak of 34.7 percent of the Chilean import market in 1963, but fell back to 32.4 percent in 1964 and 30.4 percent in 1965. The Federal Republic of Germany continued to be Chile's second largest supplier with 10.5 percent of the import market in 1965, but its sales had slipped from a high of 14.0 percent in 1961. Exports from the United Kingdom slipped slightly to 6.4 percent in 1965. French sales had climbed from 2.4 percent in 1961 to 5.0 percent in 1964. However, the latter percentage is probably unusually high because of one-time sales of jet aircraft in 1964 under a credit granted in connection with the Chilean earthquake of 1960. France's share dropped to 2.5 percent in 1965. Italy, in significant part through railway equipment sales in recent years, has regularly supplied about 2 percent of the Chilean import market.

Price and credit are probably the most important competitive factors in the Chilean import market. This, of course, does not mean that Chileans underrate the importance of quality and service but that foreign exchange availabilities and often tight domestic credit conditions by necessity shape the importer's calculations.

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[4] Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay constitute the Latin American Free Trade Association. Venezuela officially became a member of LAFTA on July 12, 1966, but the details of its new commercial relationship with member countries remain to be worked out.

A large portion of capital-goods sales is dependent upon the ability and the willingness of suppliers to provide relatively lengthy credit terms. Following debt renegotiations in January 1965, the Central Bank of Chile initiated new efforts to clear up commercial arrearages and to limit increases in new short- and medium-term credit obligations by both the public and private sectors. The policy of the bank has been to restrict new supplier credits with terms of 8 years or less. There are no restrictions on supplier credits of more than 8 years' duration.

The Chilean Government has announced that a portion of increased earnings resulting from higher copper prices will be used to reduce Chile's short-term debt. This may result in a modest increase in the country's capacity to incur new short- and medium-term credit obligations.

In order to gear imports of capital goods to Chile's development goals, the Central Bank has decided which imports financed by supplier credits will receive top priority. The seven categories, in descending order of priority, are:

(1) Capital goods for the production of exports;
(2) Capital goods for the production of import substitutes;
(3) Consumer goods and services of basic necessity;
(4) Capital goods for processing Chilean raw materials;
(5) Transportation equipment;
(6) Items necessary for general administration and the maintenance of public order; and
(7) Capital goods for modernization, enlargement, or improvement of production facilities.

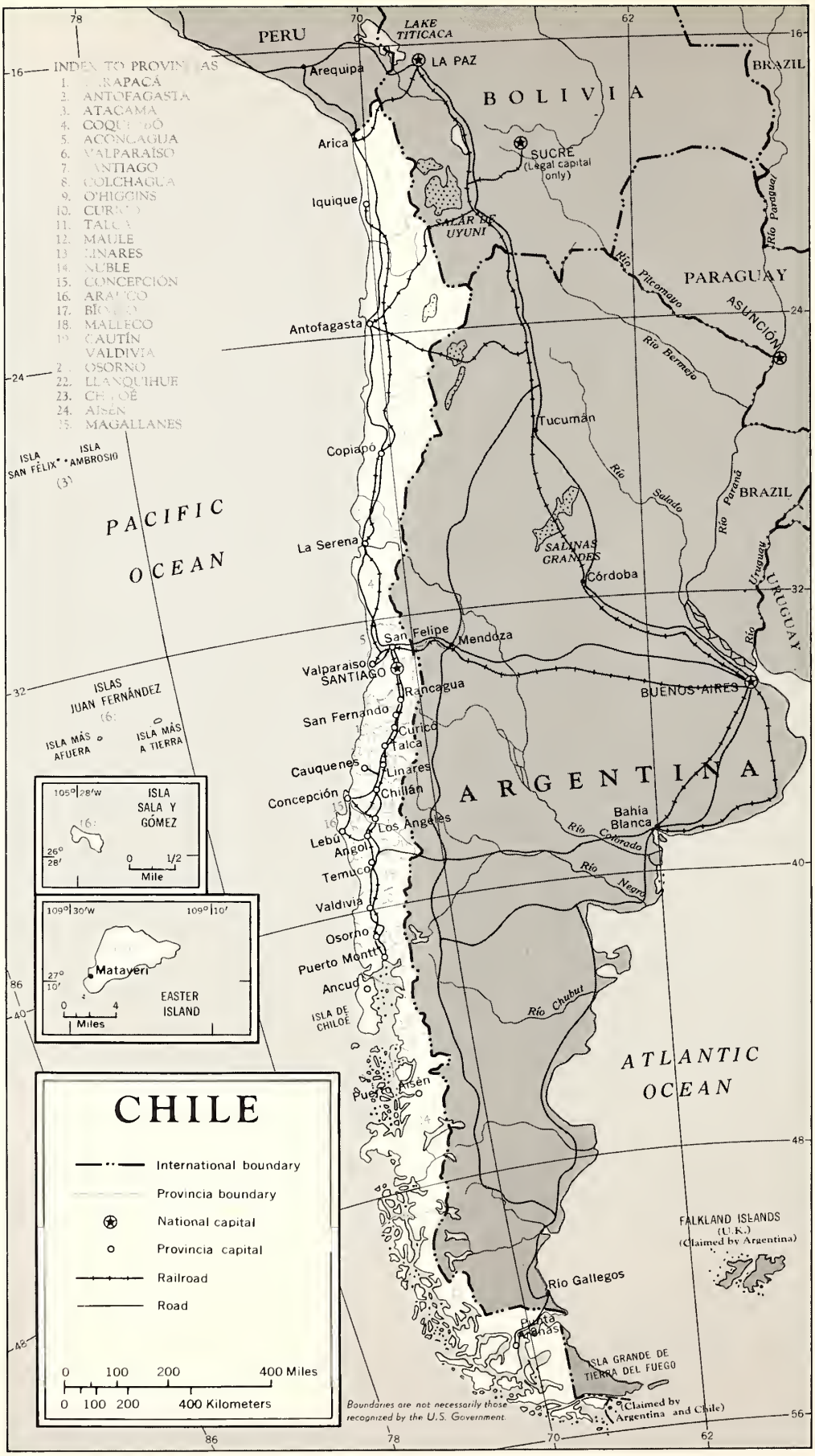
Evidence of the trend toward longer terms for supplier credits and growing Government involvement in Chilean development efforts by European countries was the financial protocol signed by France and Chile in February 1966. It provides for total French credits to Chile of between 230–250 million francs (US$46.6–$50.6 million), including:

(1) A 50-million-franc (US$10.1 million) supplier credit of 8-years' duration to CORFO for the purchase of French capital equipment by the private sector;
(2) A 100-million-franc (US$20.3 million) mixed credit (part supplier and part Government credit) of between 8- and 10-years duration;
(3) An agreement in principle to provide a 15-year loan to finance 33 percent of the cost of certain unspecified Chilean development projects. The remaining 67 percent of the 80-100-million-franc costs (US$16.2 to $20.3 millions) is to be financed by 8- to 10-year supplier credits.

In March 1966, representatives of four Italian credit institutions supplying medium-term credits signed an agreement with the Chilean Central Bank covering a 6,250-million-lire (US$10 million) credit for the purchase of Italian machinery, plants, and related accessories over a two-year period. Repayment is to be in 14 semiannual installments beginning in June 1967. The interest rate to Chile is 6 percent, with the Italian Government subsidizing the difference between that and the actual 8.5-percent rate.

According to an April 1966 Central Bank report, old or newly negotiated credits extended by the Federal Republic of Germany totaling nearly $30 million were available for use by Chile in 1966. The largest of these is $11 million for the purchase of German machinery and equipment. Another $10-million credit will be used for imports in the construction of a sugar beet refinery in Nuble Province near Concepcion. A total of $16.5 million in local currencies generated by imports financed by the above two credits will be used to finance local costs of the refinery and other projects to be selected in the future. The remaining credits are to be used for the importation of the following: equipment for medium and small industries in the private sector, transport equipment for the State Railways, port machinery and equipment, hospital equipment by the National Health Service, and trucks by the Ministry of Public Works.

The United Kingdom, Switzerland, Finland, and Italy are reported to have extended other credits to Chile for use in 1966.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ATLANTIC OCEAN
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(U.K.)
(Claimed by Argentina)
Río Gallegos
Punta Arenas
ISLA GRANDE DE TIERRA DEL FUEGO
(Claimed by Argentina and Chile)
Boundaries are not necessarily those recognized by the U.S. Government.
105°|28'W
ISLA SALA Y GÓMEZ
(6)
26° 28'
0 1/2
Mile
109°|30'W
109°|10'
Matavéri
27° 10'
0 4
Miles
EASTER ISLAND
CHILE
International boundary
Provincia boundary
National capital
Provincia capital
Railroad
Road
0 100 200 400 Miles
0 100 200 400 Kilometers

CHAPTER II

Basic Data

GEOGRAPHY AND CLIMATE

Chile extends 2,630 miles in a ribbon of land along the west coast of South America from the subtropical north to the Antarctic Zone (latitudes 17° to 56°S.). It is 221 miles wide at its broadest point (just north of Antofagasta) and has an average width of 109 miles.

Despite its narrow but extraordinary length, the country ranks only seventh in size in South America (Uruguay, Paraguay, and Ecuador being smaller). Its area, 286,396 square miles, equals that of California, Oregon, and half of Washington State.

Valparaiso, the chief seaport, is 5,965 miles by water route to New York.

From the standpoint of both geographic and economic characteristics, Chile may be divided into three main zones—north, middle, and south. Each of these divisions has distinctive subregions.

The point of transition between northern and middle Chile is usually set at 30° S. at La Serena, but some geographers move the southern boundary of north Chile to the Copiapo River. The 400-mile stretch between Copiapo and the Rio Loa embraces the great Atacama Desert, one of the driest regions on earth. Although cloud banks form daily along the coast, and there are occasional summer showers in the Cordillera, rain is virtually unknown in the longitudinal valley or pampas, where the coefficient of evaporation is greater than in the Sahara Desert. This is the region of the nitrate fields and copper mines. In the extreme north and from Copiapo south are several river valleys which sustain some agriculture.

Middle Chile extends about 900 miles, from latitudes 30° to 43° S., including the island of Chiloe. Most of the population is concentrated here. About two-thirds of this region has a mediterranean climate, with mild, wet winters and long, dry summers. Nights are cool in summer and cold in winter. Rainfall, which is less than 10 inches annually at La Serena, increases toward the south. It averages 13.8 inches at Santiago and ranges between 23.6 and 31.5 inches from the Basin of Rancagua to the Maule River. South of Concepcion, rainfall ranges between 50 and 80 inches. From the Maule River to the Bio-Bio there is a transitional zone in which the longitudinal valley has the semiarid characteristics of the Central Valley, but the western flanks of the coastal mountains and the Cordillera receive substantial rainfall.

South middle Chile, from Bio-Bio to Puerto Montt, has a short but well-marked dry season favorable to wheat, potatoes, oats, fruit, and pasture. Forests originally covered most of this region and still occupy close to half of the area. The stormy winters and cool summers resemble the Pacific northwest of the United States. South of the Tolten River are a number of lakes, dominated by snowcapped volcanoes. The scenery attracts many tourists.

The southern third of Chile's territory is a region of mountains, fiords, high winds, and heavy rains. Along the coast are many islands and waterways.

This part of Chile on the Atlantic side near the eastern end of the Strait of Magellan may be considered a distinct geographic zone. The climate is cold, dry, and windy. Like the Argentine Patagonia, this region is notable for sheep raising. Petroleum and gas deposits are exploited in this region, mainly on the island of Tierra del Fuego.

In physiography and climate, Chile resembles North America from Alaska to Lower California.

Chile's climate ranges from the subtropical deserts in the north to the rain forests of Aysen Province and the tundras of Magallanes Province in the extreme south. The cold Humboldt Current, moving northward from the Antarctic along the coast, tempers the climate of the coastal regions of central and northern Chile.

A coastal range, rising from the sea along most of the coast, varies in height from 7,000 feet in the north to less than 2,000 feet in the vicinity of Concepcion. Beyond this range are a series of valleys, basins, or pampas, and to the east the Andes and their spurs occupy from one-third to the entire width of the country.

In middle Chile the Central Valley is nearly continuous, except for minor hills, from Santiago south to the Bio-Bio River. North of Santiago the longitudinal depression disappears, being pinched out by spurs of the Andes. Here the "waist" of Chile has a width of only 56 miles.

The highest peak in the Western Hemisphere—Aconcagua, elevation 22,835 feet—rises at the head of the river of the same name, near the middle point of Chile's long eastern frontier. As far south as latitude 35° S., the passes over the Andes are all above 10,000 feet.

POPULATION

The Chilean people are mostly of European ancestry, predominantly Spanish, but the native Araucanian Indian makes a substantial contribution to the population stock. The Chileans are estimated to be roughly 66 percent Spanish-Indian, 25 percent Spanish, and 5 percent Indian, with fractional percentages of Germans, Italians, French, British, and other nationalities. Although a complete fusion of the races has not come about, few, if any, South American nations have a more homogeneous population. The pureblooded Araucanians of south Chile number about 130,000.

Of Chile's gainfully occupied population in 1960, 30 percent was engaged in agriculture, 19 percent in manufacturing industries, but only 4 percent in the economically dominant mining industry. Table 5, Appendix D shows employment in Chile by economic sectors in 1960.

In population, Chile ranks sixth among Latin American countries and fifth among South American countries. As of January 1966, the population was estimated at 8.9 million. Its rapid average annual growth of 2.43 percent approaches the 2.5-percent figure for Latin America as a whole. Both immigration and emigration are neglible.

Concentrated in the central third of the Republic, Chile's population is mostly urban. Greater Santiago, with a population estimated at 2.4 million in January 1966, is by far the principal city and accounts for a disproportionate share of the nation's total purchasing power. Other leading cities, with their 1960 populations are: Valparaiso, 259,241; Concepción, 167,468; Viña del Mar, 126,441; Antofagasta, 89,114; Talca, 80,277; Chillán, 82,947; and Temuco, 111,641. The Province of Santiago is also the leading Province. Chile's population by provinces is shown in Table 6, Appendix D.

While the population of Chile is predominantly Roman Catholic, the Constitution provides for freedom of worship, and an atmosphere of religious tolerance prevails. Church and State are separated.

Spanish is the language of Chile, but many Chileans, as well as foreigners resident in Chile, also speak English.

Standard of Living.—Among Latin American countries, Chile has enjoyed a relatively high standard of living. Real per capita income is estimated to have increased 1.6 percent annually during 1940-63. While this increase was made possible by a great expansion of manufacturing and commerce, the failure of agricultural production to keep pace with the growth of population has become a serious impediment to further gains.

A great disparity exists between the low income of rural workers—with their absence of labor organization—and higher incomes of urban workers—with their organized bargaining power, particularly in the petroleum, chemical, mining, and steel industries. These factors have also conditioned the relative ability of these sectors to defend their position in the face of rapid price inflation over the past decades. A large proportion of the population in rural areas exists only on the fringe of the modern money economy at near-subsistence levels. The estimated distribution of Chilean incomes is shown in Table 7, Appendix D.

The current Government has strongly committed itself to helping an increasing number of Chileans participate in the national market. It views this objective both as a primary aim of social policy and an essential requisite for overall economic growth.

Education.—Under a law of 1842, Chile became the first Latin American Republic to establish a system of public education. In the same year it also became the first to establish a national normal school.

NUMBER ONE ON WEST COAST OF SOUTH AMERICA: Valparaiso, Chile, chief commercial town on South America's Pacific coast, seaport, railhead.

Since 1920, elementary education for children between the ages of 7 and 13 has been compulsory in Chile, and the number of schools has increased continually. Schools operate under a centralized national program, with Government-approved private schools continuing to play an important part. Approximately 30 percent of the students attend private schools. Elementary school students may go on to public secondary schools or private and church schools. Vocational education is highly developed in the country. There are schools of agriculture, trade and industry, mining, business, art, and nursing.

The national university is the University of Chile in Santiago. There are also the Catholic University of Santiago, University of Concepcion, Catholic University of Valparaiso, Santa Maria Technical University of Valparaiso (outstanding because of its advanced methods of training in technical and engineering courses), Universidad Tecnica del Estado, and the Universidad Austral del Chile in Valdivia. Chile also has a School of Industrial Engineering and three schools of social service. Only the University of Chile is authorized to grant advanced degrees and professional titles, and it must approve candidates of other universities. The country also has naval, military, and aviation schools.

Chile's literacy rate is high. About 84 percent of all persons 15 years of age and over are literate.[5] In 1961 Chile devoted 3.5 percent of the national income to education. In terms of the national budget 21.09 percent of total expenditures were devoted to education.

Health.—Chile's general level of health and sanitation is above average in Latin America. Its National Health Service provides some form of care to at least

[5] The rate of functional literacy is certainly much lower, but Chile is still among the most literate nations of Latin America. The Chilean Government recently has devoted considerable attention and resources to the problem of literacy.

70 percent of the population. In recent years a considerable advance in health safeguards has been made, but many health problems still confront the country, particularly in rural areas.

GOVERNMENT

Chile, known officially as the Republica de Chile, is a Republic with a centralized form of government. It has the reputation of being one of the most democratic nations in Latin America. There is a national tradition of respect for the constitution, public order, and the decision of the ballot box. The present Constitution dates from 1925. Executive power, generally broader than in the U.S. system, is vested in a President, elected by direct vote for 6 years. The legislative body consists of a Chamber of Deputies elected by direct vote for 4 years and a Senate elected by direct vote for 8 years. The judiciary is an independent branch of the Government consisting of a supreme court, appeals court, and lower courts.

Chile is a unitary rather than a federal state. The largest political subdivision is the Province, headed by an intendant who "is the usual and immediate agent" of the President. The intendant is advised by a Provincial Assembly, members of which are chosen by the municipalities. The alcaldes (mayors) of cities of more than 100,000 inhabitants are appointed by the President.

Chile has a multiparty political system. While formal party coalitions are prohibited in congressional and municipal elections, they are a necessity in presidential elections and for the functioning of Congress, since no party, until the 1964 presidential election, has been able to marshal the support of a majority of the electorate. Until 1964, the largest party was the Radical Party which played a leading role in the ruling center-right coalition of former President Jorge Alessandri.

The largest Chilean party is now the left-of-center Christian Democratic Party which, with the support of other Chileans, elected its presidential candidate Eduardo Frei in the September 1964 elections. President Frei's 56-percent majority overcame the opposition put up by a coalition of the Socialist and Communist parties.

The Christian Democrats obtained a majority in the Chamber of Deputies in the congressional elections of March 1965, but its increased representation in the Senate (where one-half of the members were up for election) did not reach the one-third mark. Since a one-third vote is necessary to uphold the presidential veto,[6] the Christian Democrats must gain the votes of other party members in the Senate to enact its program. The next congressional election is scheduled for March 1969.

STRUCTURE OF THE ECONOMY [7]

Rough preliminary estimates credit Chile with a gross domestic product (GDP) of 6,517 million escudos in 1965, a 5-percent increase over that for 1964. More complete data for 1964 show a GDP of 6,207 million escudos, up 2.4 percent from 1963. National income in 1964 was 5,110 million escudos, an increase of 2.4 percent over 1963, while per capita income declined 0.8 percent to about 591 escudos. The growth of Chilean gross domestic and gross national product, national income, and per capita income for the years 1940-65 is shown in Table 8, Appendix D.

In the decade 1954-63, the average annual increase in GDP was 3.3 percent; national income, 2.9 percent; and per capita income, 0.4 percent. Comparable data available for all but the last year of the Alessandri administration (1959-63) show average annual increases of 4.1 percent in GDP, 4.0 percent in national income, and 1.5 percent in per capita income. These figures suggest the magnitude of the problem which Chile must overcome to boost per capita income in the face of a 2.5-percent annual increase in population.

Other major obstacles to economic development in recent years have been a continuing price-wage spiral resulting in chronic inflation, continuing labor difficulties in key industries, the destructive earthquake of 1960, the earthquake and floods of 1965, and the reluctance of many foreign and domestic investors to initiate new productive activities in the face of these and other problems affecting the climate for investment.

While the mining industry is usually highlighted in any discussion of the Chilean economy because it accounts for the bulk of the nation's foreign exchange earnings, the mining sector actually has regularly accounted for less than 5 percent of GDP during the 1954-65 decade. Manufacturing and commerce are the largest contributors to GDP with substantial contributions from agriculture and both private and Government services (see Table 10, Appendix D). Agriculture, including forestry and fisheries, contributed 14 percent in 1955 but only 10 percent in 1964. This shift results not so much from a transfer of resources into other sectors, as might be expected in periods of development, but from the inability of the agricultural sector to match the growth rates of the other economic sectors.

In 1964, gross fixed capital formation was 751 million escudos, or 12.1 percent of GDP. Since 1957,

[6] Unlike the U.S. system, the Chilean allows its President to veto portions of bills or add others.

[7] All figures in this section are in 1961 market prices, unless otherwise stated; 1.05 escudos=US$1 in 1961.

Chile's gross fixed capital formation has averaged nearly 11.5 percent of GDP, with a high of 13.3 percent reached in 1961 (reflecting greatly increased importation of machinery and equipment in support of reconstruction and development activities financed by foreign assistance). While separate figures are not available for private and public fixed capital formation, it appears likely that the public share of such investment has increased substantially in recent years in Government and joint Government-private enterprises. Similarly, expenditure by Government enterprises, such as the National Petroleum Enterprise (ENAP), are reported in the national accounts as private consumption expenditures. Thus, it seems likely that overall Government expenditures have been growing as a percentage of GDP. See Tables 9 and 11, Appendix D for a breakdown of expenditures as related to GDP and gross national product.

INDUSTRIAL SECTORS

Agriculture, Fisheries, Forestry

Agriculture.—Agriculture is the principal economic support of probably two-thirds of the Chilean people. But the proportion of agricultural workers to the total economically active population of Chile had declined from 39 percent in 1930 to 28 percent in 1962.

Agricultural production has not increased as rapidly as population and consumption. This has led to increased dependence upon imported foodstuffs with a consequent drain on foreign exchange. Absentee ownership, resulting in neglect of land and of its productivity, and technological backwardness are considered to be the chief contributors to low agricultural yields.

The major goals of Chilean agriculture in recent years have been to reduce reliance on imports, increase foreign exchange earnings from exports, and to improve the lot of the farmer. Steps in this direction have included the Agrarian Reform Law of November 1962 which established the legal principle that ownership of land is contingent upon its proper use. A subsequent amendment to that law permits the Government to purchase land defined as under-utilized. However, major implementation of the Government's agrarian reform program awaits action on a sweeping agrarian reform bill submitted to the Chilean Congress in late 1965.

The recent completion of a $5.4 million aero-photogrammetic survey, in cooperation with the Organization of American States (OAS) and the IBD, is expected to be used in carrying out agrarian and tax reforms as well as economic planning. The survey covered 85 percent of Chile's most valuable farmland. However, much remains to be done, particularly in the provision of commercial credit, the establishment of adequate marketing and transportation facilities, and the creation incentives for increased production.

The production of principal crops, 1955, 1964, and 1965 is shown in Table 13. Appendix D.

Fisheries.—Poor catches of fish in 1965 and 1964 led many observers to believe that the fish-reduction industry of the north had become overexpanded, overconcentrated, and overspecialized. During the years 1961-63, $50-$60 million in new capital had been invested in the zone extending from Arica to Taltal. Unfortunately, the catch in 1965 probably totaled only 395,900 tons, the lowest total since 1961. CORFO has prepared plans to reorganize and restructure several of the plants (particularly in Iquique). Increased financial assistance from CORFO is to be accompanied by direct Government participation in both ownership and management. Congress in early 1966 was studying a bill which included provisions to ease plant mergers. Improved fishing at the end of 1965 produced predictions of fishmeal exports in the neighborhood of 165,-300 tons for 1966, which would yield more than $23 million in export earnings at projected prices.

At the beginning of 1964 there were 16 fishmeal plants in operation in the north with a capacity of 436 tons of raw materials an hour. Fourteen plants, with a potential total capacity of 479 tons an hour, were under construction, but not all of them have been completed. The accent in the future would appear to be on consolidation and the creation of more efficient operations.

The current fishing fleet supporting the northern industry numbers 200 purseseiners, comprised predominantly of 110- to 187-ton modern steel vessels equipped with echo sounders, radio sets, and power equipment for handling the nets. However, many vessels were not in operating condition at the end of 1965 because of maintenance problems during the long layoff.

Development of the fisheries of central and south Chile has been slow. Plants processing frozen shrimp and plated lobster (langostino) and fresh fish have, however, acquired some new plant equipment to improve processing, and two plants have substantial expansion projects underway. Part of this investment was in response to foreign demand for frozen shrimp and langostino. The development of canneries in this area has been static, except for promotion of king crab canning in the Straits of Magellan. Some 27 processing plants are located in central Chile (between Coquimbo and San Vicente) with a total capital investment of not more than $7 million; in addition, there are six in the Calbuco area of south Chile, with a total investment of less than $1 million. The fishing fleet has declined substantially in this area and is made up, to a great extent, of thousands of small boats carrying on antiquated operations. The interest

of both Government and private capital appears to be shifting to processing of fish for human consumption —frozen, canned, salted, and smoked. The expansion of refrigeration facilities should substantially increase the demand for food fish.

Forestry.—Chile's forest and forest products industry ranks among the most important in Latin America, and its full potentialities for development are still far from realization. Some 27 percent, or 50.4 million acres of Chile's territory is classed as forest lands (i.e., woods, open woods, scrubby growths, and lands without vegetation but which have reforestation potential). Only one-half of this area is readily accessible by existing roads. Chile's forests begin in the central zone at 35° latitude S. and cover almost the entire southern zone to 42° latitude S. The natural forests consist of approximately sixty different species, mostly hardwood. The most important development in recent years has been the introduction of the insignis pine (pinus radiata), the specie most employed for reforestation. Increased demand for this specie is reflected in expansion plans of existing sawmills and in the construction of entirely new mills. The amount of timber cut has increased steadily in recent years. Much of this growth results from the increasing demand for insignis pine by paper and pulp producers. More than 90 percent of Chilean lumber production is consumed domestically. An aggressive Government-sponsored housing program, railroad maintenance and modernization operations, and steady construction activity in the private sector have accounted for the bulk of consumption. There are still untapped opportunities for investment in lumber, paper and pulp, and veneer-producing operations.

In 1963 there were 1,115 sawmills in operation, employing 21,772 workers directly, and perhaps 60,000

CHILE'S MODERN LUMBERJACKS: Large pine reserves provide the raw material for pulp and newsprint that Chile exports to neighboring countries.

persons indirectly. The industrial timber harvest in 1964 totaled 5.1 million cubic yards, of which 3.1 million were softwood and 2.0 million hardwood. Sawed lumber production totaled 1.4 million cubic yards, of which softwood accounted for 700,000, hardwood 628,000, and unclassified wood (such as railroad ties) for 55,000 cubic yards.

Chile should be able to compete well in lumber and pulp and paper within the LAFTA market. Its position should be enhanced by the expected decline in supply of its chief competitor to the insignis pine, Brazil's Pino del Parana, but much remains to be done in establishing common lumber standards and quality controls.

The future growth of the Chilean forestry industry is thought to depend, in part, upon the development of a viable conservation program. It is estimated that forest fires have destroyed in excess of 10 million acres of forest lands within the past 15 years. Denuded watersheds have caused erosion, resulting in the annual loss of thousands of acres of once productive land and in the diminution of water supplies vital to the growth of future agricultural and industrial production.

Mineral Resources

Chile is one of the world's leading exporters of copper and ranks first in the output of natural nitrates and iodine. It is an important producer of molybdenum, coal, iron ore, and petroleum. Except for petroleum, it is self-sufficient in all of the above and in ceramic, refractory, construction materials, gold, and silver. It is potentially an important producer of several chemical materials, such as sodium sulfate, potassium perchlorate, and magnesium sulfate. Other metallic minerals produced include manganese, mercury, lead, and zinc; the nonmetallics include sulfur, phosphates, clays, salt, borax, quartz, and lime. Table 14, Appendix D shows Chilean production of principal minerals in 1963-65. Plans for expanding the mining industry are discussed in some detail in Chapter III: Commodity Analysis, under the section "Mining Machinery, Implements, Accessories and Tools."

The mining industry is the mainstay of the Chilean export economy. Although it accounts for less than 5 percent of gross domestic product and employs only about 4 percent of the labor force, it supplies more than 80 percent of all export earnings and about one-fourth of total Government revenues. By far the greatest part of these earnings are accounted for by the Gran Mineria (large mines), although production by the Pequena y Mediana Mineria (small and medium mines) is of increasing importance. Until 1964, the Gran Mineria was defined as those copper companies producing more than 27,550 tons of copper annually, and those iron ore producers that return to Chile only production expenses. Thus, in 1963, it consisted of Kennecott's Braden Copper Company Anaconda's Chile Exploration and Andes Mining Companies (copper), Bethlehem-Chile Iron Mines Company, and, for statistical purposes, the Anglo-Lautaro Mining Company (nitrates). In 1964, the Chilean Congress raised the minimum copper production requirements for inclusion in the Gran Mineria to 82,650 tons.

Productivity in the mining industry as a whole is higher than in any other Chilean economic activity. It is twice that of manufacturing and three times that of agriculture. The operations of the large mines are among the largest and most modern in the world. The medium mines are also efficiently operated and produce both concentrated, blister and refined copper. The small mines, on the other hand, have been characterized for the most part by small, partly mechanized, high-cost operations generally producing only ores and concentrates. The Chilean Government, however, has had considerable success in its program to encourage production in the smaller mines through subsidized purchases of ore during times of low prices.

Mining employment is estimated at 42,000 persons. Approximately half of these work for the large foreign copper, nitrate, and iron mining companies.

ENAMI is playing an increasingly important role in the small and medium copper mining sector by its ore purchasing programs, its operation of concentrators, smelters and refineries, and its provision of technical advice and small loans for development purposes.

Copper.—Chile produced 641,999 tons of copper in 1965, compared with 685,073 tons in 1964, interrupting a steady upward climb in production levels. The setback was the result of serious labor difficulties near the end of 1965. Although a new outbreak of labor trouble occurred in early 1966, the damage to the Chilean economy was expected to be mitigated by sharply rising prices for copper. The Gran Mineria, consisting of Anaconda's Chile Exploration and Andes Mining companies and Kennecott's Braden Copper Company, have regularly produced between 80 and 85 percent of all copper mined in Chile. The medium and small mines have also experienced steady growth, producing 113,902 tons of primary copper in 1965, compared with 103,551 tons in 1964. These mines include the Empresa Minera de Mantos Blancos, the Cia. Minera Disputada de las Condes' El Soldado and Disputada mines, and Anaconda's Santiago Mining Company. Table 12, Appendix D shows a more detailed breakdown of production for the years 1961-65.

The long-planned, new investment of $420 million by the Anaconda, Kennecott, and Cerro copper companies and the Chilean Government, and the expansion of the medium and small mines are expected to boost Chilean production of primary copper to 1.3

million tons annually by 1972. This presumes increased annual output (from 1964 production levels) of 209,000 tons by Anaconda, 99,000 tons by Kennecott and 66,000 tons by Cerro. A description of the expansion programs of these companies is contained under Mining Machinery, Implements, Accessories and Tools in Chapter III: Commodity Analysis.

Refining capacity is to expand from 303,000 tons (1964) to at least 771,000 tons annually. Most of the increased output will be electrolytic copper. This includes the Government's Las Ventanas 88,000-ton refinery which began operation in 1966 and which will be expanded to 187,000 tons by 1970-71 to handle projected increased Kennecott output. Counting the existing refinery capacity of Kennecott and the Mantos Blancos mine, Chile will become the world's third largest refiner of copper.

The Government is now studying several proposals by foreign copper fabricating firms to establish new producing facilities for finished copper products.

In accordance with Chilean aims of establishing greater control over the foreign owned copper mining companies, agreements were reached with the U.S. companies whereby they would expand production and the Chilean state would become a partner in the equity structure of certain mines. These agreements are embodied in Law 16,425 of January 25, 1966, and Law 16,464 of April 25, 1966, which amend Law 11,828 of May 5, 1955. The latter law—the so-called New Deal Copper Law—had previously governed the operations of the large mines. The wording of decrees allowing the new copper program to begin is now being studied with physical initiation of the program expected sometime during the second half of 1966.

In the case of Anaconda and Cerro, Chile will receive 25-percent equity in the capital and administration of their Exotica and Rio Blanco deposits, respectively. The Chilean state will also have 49-percent equity participation in a new joint Government-Anaconda exploration company which will search for new ore deposits. Operating companies established as a result of these efforts will also have Chilean state equity participation.

One of the most important developments is the transformation of Kennecott's Braden Copper Company into a new enterprise to be called the El Teniente Mining Company. Kennecott will own 49 percent of the new firm, with the remainder passing into the possession of the Chilean Government. The Copper Corporation, a semi-autonomous state agency, will be the Government's representative in most copper matters, particularly ownership and sales policy affecting the large mines.

Chile will pay $80 million for its equity, the amount to be reinvested in increasing production at El Teniente, to be repaid at low interest over a period of years. The Government will also loan the new company $20 million. The new firm will seek another $100 million from foreign financial sources. New investments in the Anaconda and Cerro projects will total $135 million and $81 million, respectively.

As a consequence of the total $420-million investment, the country will receive an average of $40 million annually in the years 1966-70 for project costs. The benefits from these projects will not be felt fully in the Chilean economy until 1971. According to early conservative estimates based on a price of 29 cents per pound for copper,[8] Chile by 1971 will receive an estimated $301 million annually in foreign exchange earnings from copper, compared with $186 million in 1963. Both the short- and long-run demand for copper now appear to be greater than earlier estimated.

The copper legislation also contains detailed provisions regulating taxation of the companies and social welfare benefits to be accorded to mineworkers employed by the large mines.

For its part, the Chilean Government will provide support and active participation in financing; stabilize the tax, profit, and foreign exchange regimes; provide a guarantee against discrimination against copper company investments; and give import duty exemptions for equipment required for the new projects.

A side effect of the new investment will be greatly increased production of molybdenum, gold and silver, and a stimulation of coal consumption and production because of the increased electric power needs of the copper companies.

Iron Ore.—The rapidly growing iron mining industry of Chile, with reserves estimated at close to 1 billion tons, has ranked second since 1960 among Chile's extractive industries, both in value of production and export earnings. Production in 1965 totalled about 13 million tons, compared with output in 1964 of about 10,858,192 tons. Three companies produce more than 85 percent of Chile's iron ore—Compania Acero del Pacifico (CAP), Bethlehem-Chile Iron Mines, and the Santa Fe Mining Company. The remaining tonnage is mined in small operations. These are managed by contract personnel and sell their output to one of the larger companies.

Plans for expanding production of the industry are discussed in Chapter III: Commodity Analysis under Mineral Products.

Nitrates and Iodine.—Chile's nitrate ranks third behind copper and iron ore as an earner of foreign exchange. Production in 1965 was reduced by strikes, reaching only 1,276,116 tons, compared with 1,294,080 tons in 1964. Chile continues to be the world's

[8] In April 1966 the Chilean producer price for copper was raised from 42 to 62 cents per pound; it was increased to 70 cents in July 1966. Currently the price is somewhat lower and is equivalent to the future price of the London Metals Exchange.

prime producer of iodine (a by-product of the production of nitrates) with total production of 2,511 tons in 1965, compared with 2,383 tons in 1964. The nitrate industry has for some time been reorganizing its financial and marketing structure and appears to be improving its position. The Anglo-Lautaro Nitrate Company regularly accounts for more than 80 percent of all Chile's nitrate and more than 90 percent of its iodine output. Plans for the industry are discussed under "Mineral Products" in Chapter III: Commodity Analysis.

Coal.—Chile is an important coal-producing country, although it faces major problems in making coal competitive with other energy sources. Production totaled 1,903,154 tons in 1965, almost all soft coal, compared with 1,971,286 tons in 1964. Except for coking coal, Chile supplies its own coal needs and is substituting coal for petroleum products whenever feasible as a stimulant to the coal industry. The Lota-Schwager mines (which account for 85 percent of Chile's coal output) are being consolidated and modernized.

Petroleum and Gas.—After a rapid growth in output, Chilean production of crude petroleum leveled off at about 70.6 million cubic feet, annually and is expected to decline in the future. While the discovery of additional petroleum reserves has been unsatisfactory to date, gas production and reserves have increased sharply, with production totaling between 219-222 billion cubic feet in 1965 and 1964. The Empresa Nacional de Petroleo (ENAP), the Government enterprise which controls all petroleum exploration and production hopes to use an increasing amount of gas for fuel and as a source of raw materials for a projected petrochemical industry. Most of the gas, a by-product of petroleum production, is now reinjected. Chapter III: Commodity Analysis, Mineral Products, discusses the Chilean market for crude petroleum.

Manufacturing

Manufacturing, which is of growing importance to the Chilean economy, accounts for nearly one-quarter of the gross domestic product and employs about one-fifth of the economically active population. Manufacturing centers are in Santiago, Valparaiso, and Concepcion. The leading sectors are the food-beverage and the textile industries which each account for about 25 percent of the value of manufacturing output. Pulp and paper accounts for 20 percent and heavy industry for 15 percent of output. Remaining output is accounted for by the chemical industry, 5 percent, and miscellaneous manufacturing, 10 percent.

Domestic industries produce most of Chile's requirements for steel, petroleum products, pulp and paper, cement, tobacco products, beer, refined sugar, shoes, textiles, numerous household commodities, tires and tubes, and a great variety of other products. Chilean production of selected products is shown in Table 16, Appendix D. Further information on these industries is contained under the appropriate sections of Chapter III: Commodity Analysis.

The growth of manufacturing in recent years has been slowed greatly by the ills suffered by the economy as a whole. Rapid inflation has brought with it rising costs, labor difficulties, and price control problems. Under such conditions, capital has often sought safer fields. This has made it more difficult to obtain funds for expansion in an already tight credit situation. Scarce foreign exchange reserves have resulted in the imposition of stringent import and exchange restrictions. These have made it impossible or very costly to obtain desired imported manufacturing machinery, parts, and raw materials. On the other hand, the inability to obtain many foreign products has long provided a stimulus to domestic production. Table 17, Appendix D shows the production indexes of Chile's leading industries for the years 1957 and 1963-65.

Iron and Steel.—The Compania de Acero del Pacifico (CAP), a private Chilean company with minority Government participation, turns out more than 90 percent of all Chilean iron and steel products. Its Huachipato mill on San Vicente Bay just north of Concepcion is Chile's only basic iron and steel producer. The remaining production is accounted for by several small firms employing electric remelt furnaces to produce steel for casting and shaping. CAP's production and imports of iron and steel products for the years 1962-64 are shown in Appendix D, Tables 18 and 19.

CAP's expansion program is discussed in Chapter III: Commodity Analysis under the section Metallurgical Products.

CAP is a leading proponent of some form of regional integration, complementation, or preferential tariffs among Latin American countries. Its proposals have made but little progress, yet it has found another way of obtaining complementary benefits. In early 1964, CAP announced that it was entering into a joint venture in Ecuador to form a new steel company. The factory is expected to produce 29,000 tons of iron and steel products in its first year of operation. CAP is initially expected to supply the firm with 17,000 tons of semifinished steel annually. Possibilities exist that CAP will attempt to arrange similar or other forms of complementary agreements with still other Latin American countries. The establishment of some form of marketing agreement between Chile and Argentina seems likely.

Petroleum Products.—All phases of Chile's petroleum industry, with the exception of distribution, are in the hands of ENAP. Distribution is handled

through local branches of Esso Standard Oil Company (Chile) and Shell, each handling roughly one-fourth of the market, and COPEC, a privately owned Chilean firm which has a marketing agreement with Mobil Oil of Chile. Chile has one refinery in operation at Concon and another about to begin working at Concepcion. Chilean plans for the development of a petrochemical industry have generated interest in the expansion of refinery output. Table 15, Appendix D, shows Chilean production of petroleum products for 1956 and 1962-65. Chilean imports of refined petroleum products are reported in Chapter III: Commodity Analysis under the section, Blacking Resins, Industrial Fats and Oils.

Chemicals.—The Chilean chemical industry is composed of two principal groups: one mines and processes chemical raw materials (actually a branch of the mining industry), and the other manufactures industrial chemicals, drugs and medicines, paints and varnishes, and allied chemical products. The first steps have already been taken in the development of a petrochemical industry which would require investments of more than $100 million. The plans for this industry are discussed in Chapter III: Commodity Analysis under Chemicals and Related Products.

Paper.—The manufacture of pulp and paper is one of the fastest developing industries in Chile, and it appears destined to achieve substantial further growth. Chile is self-sufficient in its production of the principal paper products, and its possession of ample raw materials has given it a decided competitive advantage, making Chile the only net exporter of pulp and paper products in Latin America. Chapter III: Commodity Analysis describes Chilean production of paper products under the section Miscellaneous Manufactured Products.

Textiles.—The textile industry is one of Chile's oldest and most highly developed. The domestic industry very largely supplies the Chilean market, although there is still an important demand for some imported products. The textile industry is described in some detail in Chapter III: Commodity Analysis under Manufactured Textiles.

Automotive Industry.—Chile has an active automotive assembly industry in Arica, but its future development there, or its transfer to another part of Chile is dependent upon legislation before the Chilean Congress. The industry is discussed under Transport Machinery, Materials, and Accessories in Chapter III: Commodity Analysis.

Food Products.—The foodstuffs industries may be divided into those which mostly utilize domestic raw materials and those that depend on imported materials. The first includes flour milling; wine making; canning of fruits, vegetables, and fish; preparation of condensed and powdered milk; and the manufacture of food pastes, crackers, and bakery products. Industries depending largely upon imports are brewing, sugar, meat, vegetable oils, and confectionary. Each year about 20,400 tons of canned fruit, 13,200 tons of vegetables, 7,200 tons of fish, and 3,100 tons of shellfish are produced. Chileans spend approximately one-half of their disposable income on food products, while about one-half of the retail price of food products consists of marketing costs and margins.

Power

Chilean gross power consumption totaled the equivalent of 14,528 million kilowatt hours (kw.-hr.) in 1964. The sources for the generation of this power were, in percent: petroleum, 49.3; hydraulic energy, 25.6; coal, 14.0; wood, 10.7; and other sources, 0.4.[9] Electric power generated in 1964 totaled 5,928 million kw-hr. Table 20, Appendix D shows consumption of electric power by type of consumer for 1964. Total installed generating capacity at the end of 1964 was 1.49 million kilowatts (kw.), of which 51.8 percent was thermoelectric and 48.2 percent hydroelectric. An autonomous Government enterprise, the National Electric Enterprise (Empresa Nacional de Electricidad—ENDESA), controls 35.6 percent of this capacity; independent public power producers, 26.5 percent; and the large mining companies of the north, which produce for their own use, 37.9 percent. ENDESA and the independents make up the so-called interconnected public power system.

The largest of the independents is a subsidary of the American and Foreign Power Company (AMFORP), the Compania Chilena de Electricidad (CHILECTRA). The Chilean Government and AMFORP have reached an agreement containing the following provisions: (1) Purchase by Chile of AMFORP's holdings of CHILECTRA stock, plus assumption of part of the company's debt for $34.4 million; (2) reinvestment by AMFORP of $29.4 million in Chilean development projects of the company's choice; and (3) guarantee by the Chilean Government of the repayment in dollars of an additional $52.1 million in CHILECTRA debt to its parent, plus a release of AMFORP from obligations to CORFO and the Eximbank.

Chile hopes to raise the generating capacity of ENDESA and the other public power producers from 927,000 kw. in 1965 to 1.25 million kw. by 1970-71. For a further discussion of the industry's plans, see the section entitled Machinery, Accessories and Tools in Chapter III: Commodity Analysis.

[9] Includes fuels which generate power directly and those which are used to generate electric power.

SAND, NO; WATER, YES: Water for the Sauzal, Chile, powerplant is delivered free of silt that is removed in this desilting works.

Transportation and Communications

Chile has a well-developed railway system which is being improved. The road network is also well-developed, based on a hard-surfaced highway which runs the length of the country. Many of the roads are not hard surfaced. A substantial program is underway for the improvement of existing roads and the construction of transverse and feeder roads.

Because of the country's great length, air service is particularly important to the nation's economy, and several new airports have recently been completed or are under construction. For the same reason, cabotage is well developed in Chile, although the size of the domestic fleet has not grown in recent years. For a description of Chile's domestic and international transportation facilities, see Chapter IV: Distribution and Appendix A: Notes to Businessmen. Programs for the expansion or modernization of Chilean transportation facilities are discussed under the section, Transport Machinery, Materials and Accessories in Chapter III: Commodity Analysis.

Telegraph service between all of the principal cities and towns is provided by the Chilean State Telegraph Company (Telegrafo del Estado). A number of small private firms are also authorized to provide limited telegraph service throughout the country. Railway telegraph is used to carry commercial messages in areas where these companies do not operate.

Telephone service is provided by nine companies, all but one of which are privately owned. The Cia. de telefonos de Chile (CHILTELCO), a subsidiary of International Telephone and Telegraph Co., is by far the largest, accounting for over 95 percent of the total (approximately 240,000) telephones in use. CHILTELCO awaits ratification of an agreement with the Chilean Government under which it would sell 49 percent of its equity to Chile and begin work on an $125-million expansion program. A Government enterprise, Empresa Nacional de Telecommunicaciones, has

been established and will be responsible for operating the basic telecommunications network. For a description of these developments, see Chapter III.

FINANCE

Currency

The basic monetary unit of Chile is the escudo which is divided into 100 centesimos and which replaced the peso on January 1, 1960, at the rate of 1 escudo for 1,000 pesos. Paper currency is issued by the Central Bank and is legal tender in unlimited amounts. Its legal value corresponds to its purchasing power in the market. No par value has been declared to IMF. Coins of silver, copper-nickel, and bronze-aluminum alloys are in circulation. International gold transactions now must be carried out through the Central Bank.

Exchange

A dual exchange system is in operation in Chile. The bankers rate, basically, applies to international transactions in goods and invisibles associated with merchandise trade and transactions of the Government and its semi-public entities. At this time, most international trade transactions are covered at the premium bankers futures rate, with payment ordinarily corresponding with the end of the mandatory 80-day payments waiting period. A brokers rate applies to a relatively few transactions not permitted in the bankers market, including tourism, repatriation of capital, and remittance of earnings. While both of these rates were intended to fluctuate freely, the Central Bank has exercised considerable influence over the exchange market. Regulations are in force limiting operations on the brokers market to banks, requiring gold transactions to be carried out through the Central Bank, limiting foreign exchange available for tourism, and restricting the letters of credit issued by domestic banks to foreign suppliers. See Chapter VI: Trade Regulations and Practices for further information.

These exchange rates have undergone steady depreciation since their unpegging in 1962. A recent promising trend has been the narrowing of the spread between the bankers spot and forward rates, although the gap between the bankers rates and the more depreciated brokers rate is still considerable. These were the effective buying rates as of November 1, 1966, in escudos per US$1: bankers spot, 4.31; bankers future, 4.32; and brokers, 4.95. In 1965, the bankers spot rate depreciated by 28 percent, the futures rate by 14.5 percent, and the brokers rate by 28.7 percent. See Table 21, Appendix D for the average Chilean exchange rates for the years 1956-65.

There has been a very substantial improvement in foreign exchange availabilities in Chile from the years 1962 and 1963 when payment delays often reached a year or more, and when some payments could only be made in the form of dollar-denominated bonds (pagares). The official waiting period for import payments has been reduced from 120 to 80 days with most payments effected shortly thereafter, and the Chilean Central Bank is devoting a significant portion of increased earnings from exports to eliminating arrears and reducing the mandatory delay. Most delays beyond the mandatory waiting period are now the result of tight credit or documentation problems.

Prices and Money Supply

Chile has experienced severe inflation in recent years. Consumer prices rose 45 percent in 1963, and the increase has exceeded 25 percent every year since 1962. The current Government has proclaimed the containment of inflationary pressures to be essential to its achievement of social and economic goals. The Government early proclaimed its aim of limiting the overall rise in the cost of living to 25 percent in 1965, 15 percent in 1966, and 10 percent in 1967 while permitting prices for agricultural products to rise more rapidly relative to those for industrial products.

The limiting of consumer prices to an increase of 25.9 percent and of wholesale prices to 24.5 percent in 1965 represented a major achievement. However, strong upward pressures on prices continued to be evidenced by the 32.7-percent rise in the wholesale price index for domestic products and the 64-percent increase in the money supply in 1965. The Government's new wage policy establishes a sliding scale for wage adjustments based on increases in the cost of living. Under that policy, the lowest paid workers have had their wages increased by the full amount of price increase, while better-paid workers will receive a scaled-down raise. Considerable progress is being made in the fiscal sector in increasing revenues through reform of the tax structure and tax administration while installing more precise budgetary controls and reducing the deficits of autonomous Government agencies and enterprises. Table 22, Appendix D shows the increases for retail prices, wholesale prices, and the money supply, 1960-65.

Banking

The Chilean banking system consists of the Central Bank of Chile (a private bank with Government representatives on the board of directors), 28 private commercial banks, 2 mortgage credit institutions, the State Bank of Chile, and 2 development banks (The Mine Credit Bank and the Agricultural Colonization Bank). The latter three banks are state-owned.

As originally established in 1925, the Central Bank was primarily designed to discount commercial paper and to maintain the stability of the currency. A series

of special laws gradually changed the character of the bank, enabling it to provide credit both to the Government and to commercial banks and private individuals. It helps regulate credit and plays a major role in setting and administering import policy. Nearly all imports must have the bank's approval, and almost all gold and foreign exchange transactions—including requests for remittances to foreign suppliers—are controlled by the bank. The Government has introduced legislation to bring the Central Bank under direct Government control.

The State Bank of Chile is the sole depository of funds held in Chile not only by the Chilean Treasury but also by Chilean official and semi-official institutions. It is also the only savings bank.

Of the 28 private commercial banks, 4 are foreign banks with branches in Chile. Only one, the First National City Bank of New York, is United States-owned. A private industrial development bank and a cooperative development bank may be established with the assistance of both the IDB and AID.

At present, CORFO is the principal source of industrial credit. Its activities, in the past, have been generally oriented more toward the establishment and promotion of new industries rather than toward facilitating credit to industry.

Investment

Chile's diversified natural resources and enterprising population have long favored foreign private investment capital. Historically, foreign investment has played an important part in Chile's economic growth, particularly in such basic industries as mining, transportation, and electric power. Unfavorable investment factors have included Chile's overdependence on mineral exports, an archaic agricultural economy, a limited domestic market, and a history of Government control of exchange, foreign trade, prices, and other economic activities. On balance, however, Chile's democratic tradition in government, competent businessmen, adaptable labor, and wide range of natural resources should provide a favorable field for foreign capital in the future.

Direct foreign investments in Chile are concentrated in the mining sector. No exact figures as to overall direct foreign participation are available. Some sources estimate them at between $1.2-$1.3 billion, of which over $500 million is in mining. A recent estimate sets the probable total of U.S. investment in Chile at about $1 billion, divided as follows: mining, $750 million; utilities, $175 million; other, $75 million. The book value of direct private U.S. capital invested in Chile, as reported by the U.S. Department of Commerce, Office of Business Economics, was estimated to be $829 million at the end of 1965, as follows, in millions of dollars: mining and smelting, 509; manufacturing, 39; trade, 24; and other (including utilities and petroleum), 257.

Chile's Foreign Investment Law of March 1960, extends benefits and incentives to foreign investors by (1) guaranteeing freedom to repatriate capital and remit profits, (2) providing tax guarantees, and (3) allowing for the duty-free entry of capital equipment and raw materials in many instances. Such benefits may be extended to new industries using a high percentage of local raw materials and to those industries established to produce for export. Emphasis is placed on foreign capital that will initiate, promote, and improve production in agriculture, mining, fishing, and manufacturing.

Exchange treatment for such investments was formalized by the Central Bank of Chile through issuance of Circular 332 (November 6, 1963) of its Foreign Trade Department. The Circular establishes conditions under which investments made with the purpose of encouraging or increasing exports of agricultural, industrial, or mining products may be brought into the country through the brokers' exchange market while permitting the repatriation of capital and remittance of earnings from exchange earnings to be calculated at the more favorable bankers rate. The Central Bank, with the help of seed capital provided by the IDB, has also established a special credit system to give more immediate encouragement to exports.

The Chilean and U.S. Governments in December 1963 agreed to expand their Investment Guaranty Agreement of July 1960 to cover war risks, insurrection, revolution, and expropriation in addition to convertibility. While this agreement has not yet been ratified by the Chilean Congress, coverage is effective for any investments approved by both governments under the agreement.

Active stock exchanges are located in Santiago, Concepcion, and Valparaiso. The stocks of some 350 companies are traded there. While Chile's chronic inflation has tended to stimulate holding of securities, other factors, including tight credit controls and political uncertainty, have restrained market activity. New stock offerings are often made on one- to three-year credit terms, frequently with a downpayment, but new issues have been difficult to sell.

Balance of Payments

Chile's balance-of-payments prospects have been greatly improved, thanks to higher copper prices and increased copper production. Official 1966 balance-of-payments estimates, published before 1966 increases in copper prices, foresaw merchandise exports and imports in balance at about $745 million each. The same estimates predicted a deficit on current account of $146 million which was to be counteracted

by a net capital inflow of $220 million. Copper accounted for about 60 percent of all Chilean export earnings in both 1964 and 1965. According to the general rule of thumb, each cent-per-pound increase in the price for copper at current Chilean production levels results in about $7-$8 million in increased exchange earnings annually for Chile from the exports of the large mines. The precise effect of this increase on the Chilean balance of payments is difficult to predict because the above calculation does not take into account the rising production of the medium and small mines, production losses from strikes early in 1966, and the future condition of the world copper market.

The Chilean Government has stated that some of the increased earnings will be used to retire a portion of Chile's foreign public debt—estimated to be in excess of $1.8 billion—and to import equipment needed to increase domestic industrial production. Chile gained temporary respite from its heavy debt burden falling due in 1965 and 1966 through renegotiation in February 1965 of 70 percent of its Government and Government-guaranteed medium- and short-term debt.

Chile experienced serious balance-of-payments problems during 1960-63, when deficits on current accounts were due primarily to trade deficits. The current account deficit was sharply reduced in 1964 (thanks to the near-balancing of the trade account) and reduced even further in 1965 as the result of both the first export surplus ($84.3 million) since 1962 [10] and tightening of controls on imports. Since 1962, these deficits have frequently been financed by large-scale official capital inflows—primarily in the form of long term foreign assistance loans. Thus, net official capital inflows averaged $132 million annually for the years 1962-64 and probably was very close to that average in 1965. Disbursements of all forms of U.S. economic assistance during the years 1961-65 averaged $121 million annually. (Chile's balance of payments for 1962-65 is reported in Table 23, Appendix D and U.S. assistance to Chile for the years 1961-65 in Table 4, Appendix D). Chile has also received very substantial assistance from international financial institutions, such as the IMF, IBRD, and IDB.

Foreign Trade

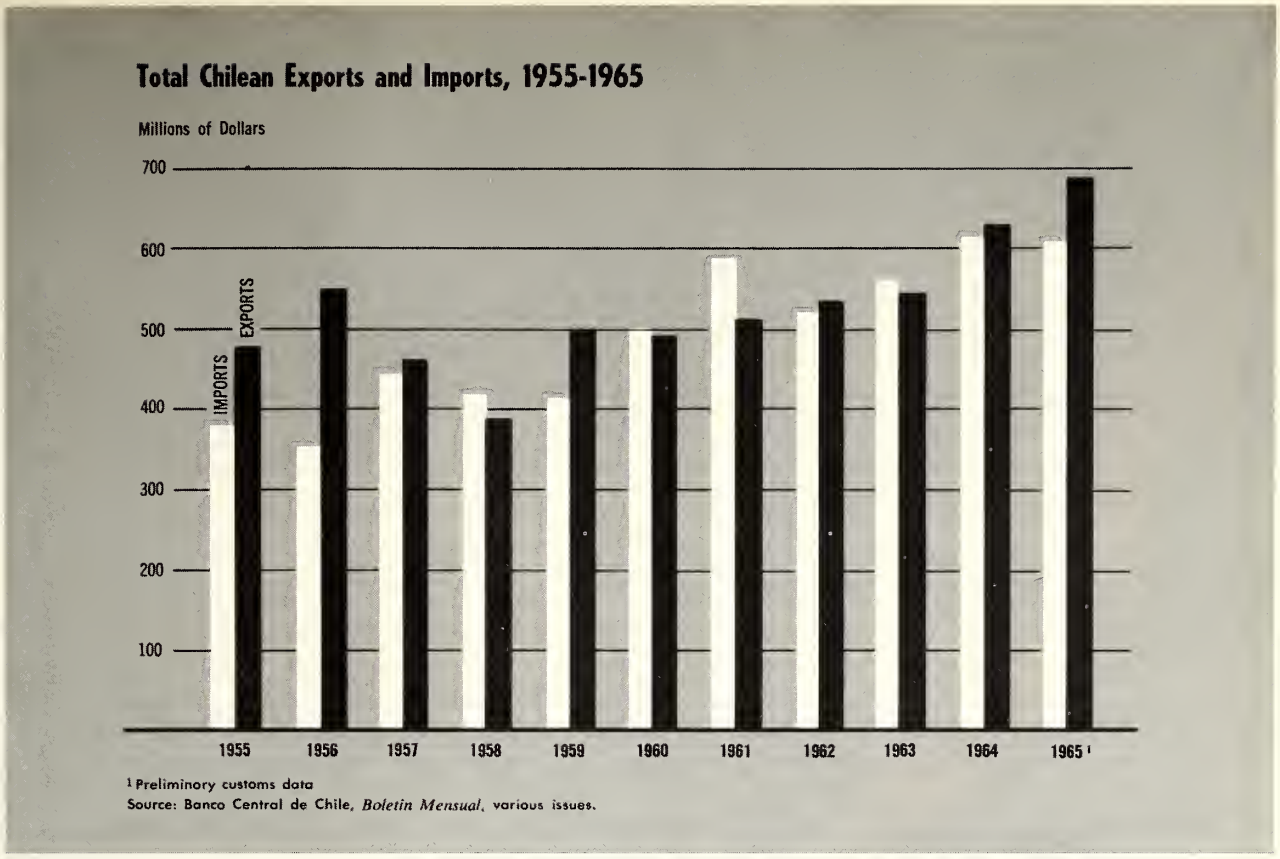
The total value of Chile's combined exports and imports have exceeded $1 billion every year since 1961. The value of this two-way trade exceeds that of the more populous Republics of Peru and Colombia. On a per capita basis, Chile's foreign trade outranks that of Argentina, Brazil, or Mexico. Chart 1 shows total Chilean exports and imports for the years 1955-65.

Chilean exports of copper and copper wire, alone, accounted for 65.3 percent of her total exports of $626 million in 1964. Iron ore (11.1 percent), nitrates (4.8 percent), and molybdenum concentrates (2.4 percent) were other large individual export items. Fruits, vegetables, wool, cellulose, and paper products are increasingly important for exports. Poor fishing has reduced fishmeal and fish oil sales in recent years, but a revival is expected in this important export category. Chilean exports of principal commodities, 1962-64, are shown in Table 24, Appendix D.

The United States continues to be the largest single market for Chilean exports, with purchases totaling $213 million in 1965 (31 percent of all Chilean exports in 1965). In 1965 Germany took 13 percent, and the United Kingdom and the Netherlands 11 percent, each, of total exports. Chilean sales to Japan have risen to 11 percent of the total. Chile severed its diplomatic and trade ties with Cuba in 1964 in conformity with an OAS resolution. Table 2, Appendix D shows total Chilean exports by regions and principal countries for the years 1961-64.

Chilean exports to LAFTA (primarily to Brazil and Argentina) have not kept pace with Chilean imports from LAFTA countries. Thus, while LAFTA products accounted for 20 percent of Chile's total $604 million in imports in 1965, sales to LAFTA represented only 7 percent of all Chilean exports. The slower increase in exports to LAFTA, compared with imports from LAFTA, has been one of the principal motives for the Chilean Government's actively seeking more effective modes of Latin American economic integration. In addition to the mutual reduction of customs charges within LAFTA, Chile has negotiated complementation agreements for trade in electron tubes and statistical machinery and electronic-data processing systems among Argentina, Brazil, Chile and Uruguay. Under these agreements each country is to supply the other with designated products or components. Important steps have been taken, aimed at integrating the automotive industries of Argentina, Brazil, and Chile. Special arrangements have been worked out for trade in iron and steel products between Ecuador and Chile, and studies have been undertaken with respect to 14 industries involving trade between Argentina and Chile. More recently, Chile has exchanged trade missions with Venezuela (a new LAFTA member); these missions have discussed integration schemes involving several industries. Venezuela, as a leading supplier of crude petroleum to Chile, may figure in Chilean plans for a petrochemical industry. The establishment of such an industry on the scale projected by Chile can only be achieved with access to the LAFTA market.

[10] Customs data shown in Table 2, Appendix D, shows export surpluses for 1962 and 1964. However, balance-of-payments data prepared at a later date, which take into account such factors as smuggling, report trade deficits going back to 1959.



DEVELOPMENT PLAN

Chile was one of the first Latin American countries to produce a national development plan. The Ten Year Plan (1961-70) called for an impressive 5.5-percent annual growth in the gross domestic product and a 3-percent increase in per capita income. This would have required an increase in gross domestic investment from 10 percent to about 18 percent of gross domestic product. Agricultural production was projected to increase by 5.5 percent, mining by 6 percent, and manufacturing by 6.5 percent annually. An increase in installed electric power from 1,304,000 kw. (1960) to 2,569,000 kw. in 1970 was projected. The length of paved roads was expected to rise from 1,740 miles in 1961 to 3,420 miles by the end of the 10-year period. Freight capacity of the nation's railway system was expected to increase by 40 percent over the period. The total cost of these investments was estimated at 9.5 billion escudos (equivalent to $10 billion at 1960 prices), of which $2.5 billion was calculated to be the foreign exchange cost. Foreign exchange costs of investments were estimated as follows in millions of dollars: manufacturing, 831; transportation, 500; power and fuel, 411; mining, 364; agriculture, 111; urbanization and communications, 64; and other activities, 260.

While many of the plan's goals have been achieved on or ahead of schedule, performance in some areas has lagged. The failure to reach agreement on investments in copper mining has been particularly troublesome since increased earnings from these investments were to have been a major source of financing for the later stages of the program. The current Government is now preparing a revised plan for the years 1966-70. The revised plan is not expected to be completed until the end of 1966 and is expected to contain more detailed projections for individual economic sectors than the original plan.

The Minister of Finance has announced that Chile hopes to make these increases under the plan, in percent: agricultural output, 300; mining, 62; manufacturing, 63; transportation, 72; and construction, 175. At the same time, increases in administrative services are to be held to 19 percent and intermediary services to 8 percent. To finance this expansion in the plan, the Minister stated that investment would have to double and exports increase by 70 percent.

CHAPTER III

Commodity Analysis

In this chapter, the Chilean import market is discussed in terms of the commodity classification system employed in the Chilean tariff. The tariff is divided into 13 major sections, such as Section I: Mineral Products and Section XII: Transport Machinery, Materials and Accessories. These sections provide the headings for each of the principal parts of the text and the accompanying tables of this chapter. The 13 sections are subdivided into 81 commodity headings, known as groups. For example, Group 4: Coal and Mineral Fuels falls under Section I: Mineral Products. The groups are included in the above-mentioned tables and may supply subheadings in the text. The groups are further subdivided into individual products or types of products and assigned a number in the Chilean tariff, e.g., 1515-021, glass wool, conglomerated.

If a product is not included in the group in which it would logically fall, other related sections should be checked. For example, the item 1419-001, fixed seats for automobiles falls under Group 64: Railway and Tramway Equipment and Material.

For convenience sake integrated projects which create demand for different types of equipment are grouped together. Thus, a planned copper mining project which would require trucks, earthmoving equipment, rail transport equipment, communications equipment, structural steel, and explosives is usually discussed under only one heading—in this case Group 59.

For each of the larger statistical classifications an attempt is made to indicate the magnitude and composition of such imports over the years as well as the principal countries of origin for those products. Information is included on local production, consumption, and other data useful for evaluating the market.

The existence of domestic production of a product is particularly significant since the Chilean Government provides extensive customs protection for domestic industries. In general, when a domestic industry can supply local demand for an item, the importation of that item is either prohibited outright or discouraged by heavy import duties, surcharges and prior deposits. Where the local industry can meet only part of the demand for a product, protection is still quite formidable but not necessarily prohibtive. Information on the rates of duties and other restrictions applicable to a particular product imported into Chile may be obtained by writing the American Republics Division, Bureau of International Commerce, Department of Commerce, Washington, D.C. See also, U.S. Department of Commerce, Bureau of International Commerce: *Basic Data on the Economy of Chile*, Overseas Business Reports 64-138, January 1965. In addition, the Bureau prepares more detailed market studies on individual commodities. Those studies may be obtained upon request. Their titles are indicated, as released, in the Department's *Business Service Checklist*, mailed weekly upon request.

Mineral Products

Although Chile is rich in a wide variety of mineral resources and mineral exports are the principal source of exchange earnings, importations of crude mineral

HYDROELECTRIC POWER: Abanico Spillway Canal of Empresa Nacional de Electricidad viewed from the forebay.

products have ranged from 4.4 to 12.3 percent of total imports during the past decade, but only between 6.2 and 4.4 percent during the years 1961-64. In the years 1961-64, imports of crude mineral products averaged $32 million annually. In 1964, unrefined and semirefined petroleum products accounted for 53 percent of crude mineral imports, while coking coal accounted for 15.6 percent of such imports. Until 1961, the U.S. share of crude mineral products fluctuated around the 90-percent mark, but in that year Venezuela, the Netherlands Antilles, and Peru became very active in supplying the petroleum market. Indeed, Venezuela emerged as the leading supplier of mineral products in 1962 and 1963, although the United States regained its position in 1964, with 42.5 percent of the market. Table 3 shows Chilean imports of mineral products.

While the level of crude oil imports has leveled off in recent years because of the great upswing in domestic production by ENAP, Chilean crude reserves may be insufficient for supporting current production levels. While output of crude reached a new high of 76.8 million cubic feet in 1964, production dropped, for the first time, in 1965. Although the search for new fields is being actively pursued, results so far have proven disappointing. Reserve estimates based on current production levels range from 5 to 10 years, and it now appears that the growth of Chilean petroleum self-sufficiency has been reversed.

Chile supplies all of her own coal needs, except for high grade coking coal used by CAP, near Concepcion, which imports about 40 percent of its coking coal needs. CAP now operates 70 coke ovens with a 1,650-ton daily capacity. Gross coal production was 1,903,156 tons in 1964, mostly bituminous with some lignitic production. Coal imports in 1964 consisted of 431,808 tons of coking coal, 11 tons of anthracite, and 116 tons of metallurgical coke—all supplied by the United States. Coking coal imports should continue to increase as the CAP moves ahead in its active expansion program.

CAP has greatly expanded its steel ingot production to meet current Chilean needs and is rapidly moving forward with a program to further increase capacity (see Section on Metallurgical Products). Steel ingot production totaled 599,819 tons in 1964, but only 486,092 tons in 1965 because of strikes. The nonferrous metals industry supplies almost all domestic requirements and carries on a substantial export trade. Seven firms are engaged in the recovery of nonferrous metals and alloys from new and used scrap and dross.

While metals represent a small portion of the Chilean import market, substantial increases have been registered by aluminum, tin, and zinc. Increased consumption of tin is expected to result from the expansion of the domestic canning industry. Chile's only producer of zinc shipped ore with 943 tons of metal content to Belgium in 1964, with about 85 percent returned to Chile for local consumption. The Government plans to follow the same course with lead, 1,322 tons of which (metal content) were produced in 1964. Imports of lead, in ingots, totaled 1,986 tons. The United States is the principal supplier of aluminum and zinc, while the United Kingdom leads in tin.

Chilean purchases of nonmetallic minerals have shown the greatest increases for refractory materials and clays, thanks to the expansion of CAP's steel

Table 3.—Imports of Mineral Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 1	Ores, crude or simply worked; pure metals.	6,819	2,322
4-001	Aluminum, in ingots	1,336	956
8-001	Tin, in ingots	2,283	23
11-002	Ferrochromium	105	82
17-001	Lead, in ingots	489	109
-002	Lead alloys, in ingots	59	45
19-001	Zinc, in ingots	2,314	1,044
Group 2	Nonmetallic minerals, crude or simply worked.	4,009	2,952
21-001	Clays for laying refractory brick	52	40
-002	Refractory clays for smelters	18	16
-003	Fuller's earth, industrial	42	24
-004	Clays, other than kaolin or white clay, n.e.s.	315	187
-005	Bentonite	149	103
-011	Refractory compositions, with clay, in powder.	134	11
26-003	Calcined magnesite, impure	734	626
-004	Refractory dolomite	869	869
28-001 to -011	Abrasives and infusorial earths such as Kieselgur which can be used as abrasives.	116	43
29-001	Graphite or black lead	38	12
31-001	Guano, natural	223	[1]
43-002	Dolomite, natural	584	544
-004	Feldespar	48	[1]
-008	Phosphoric anhydride ores	209	209
-009	Fluorspar	47	[1]
-020	Sulfur ores	187	187
Group 4	Coal and mineral fuels	23,730	9,393
43-042	Coal, in bulk	5,403	5,403
-049	Natural crude petroleum for refining in Chile.	1,988	288
-050	Petroleum for the Chilean Navy	1,238	509
-051	Crude petroleum	10,111	2,369
-052	Petroleum for steam boilers	280	166
-053	Road oil	245	104
-054	Petroleum for diesel engines	4,452	543
	All commodity groups, total	34,558	14,667
	Listed principal commodities, total.	34,068	14,512
	Principal commodities as percent of total all commodity groups.	98.6	98.9

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

making facilities and the growth of metals fabrication. Imports of clays and refractory materials other than dolomite and calcined magnesite (21-001 through 21-011) totaled 7,239 tons in 1964. The great number of small clay diggings and backyard industries using clay and clay products in Chile makes an accurate estimate of production and consumption difficult, as is the case also for kaolin, quartz, feldspar, and construction materials other than cement. Ministry of Mines data on these products is collected from questionnaires sent to known significant producers who normally work only a small portion of active properties. Industrial clay production is limited mostly to the Concepcion area where beds of high-grade material underlie the coal horizons while clay used for household articles is scattered throughout Chile. Total production reported for 1963 was 28,294 tons, with production estimated for 1964 at 18,825 tons.

The three known producers of feldspar produced 636 tons in 1964. Chile's limestone reserves are well distributed throughout the length of the country and are sufficient to satisfy all conceivable needs in the future. Guano imported from Peru is mixed with other fertilizer materials to produce enriched fertilizers. The importation of sulfur ores is not expected to increase since the recovery of sulfur from fumes of copper smelters and of plants roasting pyritic materials is expected to supplement an expected increase in domestic production. Sulfur is needed for sulfuric acid by copper, fertilizer, and other industrial facilities.

Natural Forest Products

This tariff category includes synthetic rubber as well as unworked lumber, natural rubber, latex, cork, and other raw forest products. Imports in the years 1961-64 averaged $4.9 million annually, with those from the United States averaging $2.0 million. Table 4 shows Chilean imports of natural forest products, by commodity groups and principal commodities, total and from the United States in 1964.

Synthetic and natural rubber are the most important imports in this category, with 4,350 and 3,111 tons of those materials, respectively, imported in 1964. The United States was the principal supplier of synthetic and the United Kingdom the principal supplier of crude rubber in that year. The greatest part of this was consumed by the Industria Nacional de Neumaticos, S.A. (INSA), in which the General Tire and Rubber Company is a participant. INSA, currently the only producer of tires and inner tubes in Chile, has announced plans for increasing its tire-production capacity from 570,000 to 1,150,000 units annually. In addition, the Firestone Tire and Rubber Company recently revealed plans for producing tires in Chile.

Chilean forests provide all but a negligible portion of the country's lumber needs. Thirty-seven percent of total lumber production in 1964 was accounted for by the *Pino Insigne* (Pinus Radiata or Monterrey Pine). Imports in the recent past have been confined to timbers of extra long and large dimensions—usually Douglas fir or redwood—for use by the mining industry. Chile has demonstrated interest in developing tree plantations seeded with species common to the U.S. Northwest, such as the Douglas fir.

Table 4.—Imports of Natural Forest Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 5	Unworked wood	87	55
47-001	Pine lumber, unworked	69	53
Group 6	Other forest products	6,332	2,033
50-001	Common charcoal, from wood	36	36
-002	Molded charcoal, from wood	37	34
51-001	Carnauba wax	84	3
-002	Synthetic wax for industrial use	92	25
52-001	Cork, in slabs	498	1
-002	Cork, shredded	106	[1]
57-001	Natural rubber, crude	2,282	59
-002	Grooved or smoked rubber, natural	149	2
-003	Synthetic rubber	2,296	1,741
-004	Natural latex	374	1
-005	Polybutadiene-styrene	103	[1]
-011	Rubber, from synthetic latex	117	109
59-001	Rubber, residues or reclaimed	84	12
	All commodity groups, total	6,419	2,088
	Listed principal commodities, total	6,327	2,076
	Principal commodities as percent of total all commodity groups	98.6	99.4

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Sanitago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

Animal Products (Unmanufactured)

Imports of unmanufactured animal products have increased substantially both absolutely and as a percentage of total imports during recent years. Thus, in the first half of the last decade total imports hovered around a $10-million annual average while accounting for an average 2.6 percent of the market. However, in the years 1960-64, imports of animal products averaged $33 million annually, or 5.7 percent of total imports. Table 5 shows Chilean imports of unmanufactured animal products, by commodity groups and principal commodities, total and from the United States in 1964.

Live animals account by far for the largest portion of animal product imports; the portion was 74 percent in 1964, a representative year. Argentina supplied 99 percent of such imports, mostly cattle, with the United States supplying the remainder, $120,000

worth of chickens. However, the outlook for selling U.S. cattle appeared to be improving in the latter part of 1965 as more Chileans became convinced of the quality of U.S. stock. Purchases of breeding cattle under a $19 million World Bank loan were to total between 33,000 and 55,000 head during the years 1966-68, with about 85 percent of these to be Herefords and 15 percent Holsteins. Some 11,000 have already been purchased, about half from Argentina, and the remainder from New Zealand, Australia, and Canada. About $15 million remains to be disbursed.

Table 5.—Imports of Animal Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 8	Fishery products	17	1
Group 9	Live animals	27,740	120
82-003	Chickens and other fowls	156	120
83-001	Cattle, male, older than 6 months	26,642	[1]
-002	Cattle, female, older than 6 months	257	[1]
-004	Breeding cattle	482	[1]
84-004	Horses, for breeding	42	[1]
86-001	Sheep	80	[1]
-002	Pedigree breeding sheep	54	[1]
Group 10	Wool and other textiles of animal Origin, crude.	5,974	9
93-001	Sheep wool, washed	1,759	[1]
-003	Wool tops	4,141	[1]
Group 11	Hides and skins and animal offal, crude.	3,080	[1]
95-004	Bone meal	118	[1]
96-004	Sheepskins, with hair, untanned	31	[1]
-005	Cattle hides, with hair, untanned	2,878	[1]
Group 12	Aviculture, apiculture, and sericulture.	610	49
104-002	Silk floss or waste	589	48
	All commodity groups, total	37,421	179
	Listed principal commodities, total	37,229	168
	Principal commodities as percent of total all commodity groups	99.5	93.9

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

The Empresa de Comercio Agricola (ECA), government purchasing agency, was considering the importation of a trial shipment of feeder cattle from the United States for fattening during the Chilean fall, winter, and spring growing seasons. If economically successful, Chile might import 10,000 to 20,000 head of feeder cattle each year. Imports of about 25,000 ewes and 1,200 rams over a three-year period were being considered. The World Bank loan was also to finance imports of breeding hogs and sheep.

The $19 million World Bank loan calls for the improvement of 825,000 acres of pastureland and the acquisition of machinery, materials, and breeding stock to help develop the livestock industry. Complementing the loan was another for $5 million to modernize and expand milk plants and slaughterhouses and associated facilties. The local borrowers are free to select the makers of agricultural machinery and the materials they prefer. The type of cattle will be selected jointly with Chilean farmers associations or stud breeders societies.

The Chilean Government, in an effort to raise the meat protein consumption levels of the population, has sought to promote the consumption of chicken, a much cheaper source of protein than the now favored beef. Thus, the Government ordered the delivery of 200,000 baby chicks in late 1965 as an aftermath of meat-shortages produced by the disastrous floods of that year. As a second step, CORFO approved loans totaling $102,000 plus 917,000 escudos to be used primarily to increase broiler production, to increase and improve the production of feed concentrates, and to enlarge a poultry slaughterhouse located near Santiago. The Chilean Government with the support of AID has been promoting the production of both chickens and hogs by farmer cooperatives.

Chilean imports of hides and skins have increased in recent years, with nearly all of Chile's requirement met by Argentina. Negligible amounts of fish and silk are imported.

Chilean wool imports usually account for only 3 to 4 percent of total supply. Generally, these imports are special types, such as Merino over 64's, which are not available in Chile in sufficient quantity to support production of high quality textiles. Annual import requirements have remained steady in recent years at about 1,100 tons (grease basis).

Agricultural Products

While Chilean agricultural production is sufficient to supply the bulk of domestic needs and to support exportation of several products, there has been a growing dependency upon imports. Imports of basic agricultural products averaged $61.7 million annually during 1960-64, ranging from 7.1 to 15 percent of total imports. Cotton and wheat accounted for 57.5 percent of imports in that category in 1964, and the addition of coffee and tea raises that figure to 75.5 percent. Table 6 shows Chilean imports of agricultural products by commodity groups and principal commodities, total and from the United States in 1964.

The United States in recent years has maintained its position as the leading supplier of basic agricultural products (34.1 percent in 1964) because of its predominance in wheat sales. Peru has held second place recently, although Mexico moved ahead in 1964. Most of their sales consist of cotton.

Table 6.—Imports of Agricultural Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 13	Live plants and seeds	1,013	704
108-001	Alfalfa seed	338	304
112-001	Clover seed	166	63
113-006	Rye seed	54	33
-016	Grazing grass seed	180	124
-021	Seeds for agriculture, n.e.s., other than vegetables, barley, and melons	241	156
Group 14	Cereals	20,078	16,987
114-001	Rice, hulled or not, also if crushed	2,158	170
-011	Rice, milled (bleached)	1,431	1,197
120-001	White wheat	16,479	15,611
Group 15	Legumes	4	4
Group 16	Fruits and vegetables	3,618	15
138-013	Fresh avocados	96	[1]
-015	Fresh pineapple	144	[1]
-016	Fresh bananas	3,249	[1]
-017	Fresh watermelons	38	[1]
Group 17	Vegetable food products, stimulants	14,326	317
144-001	Cocoa, crude or in the bean, husked or not	695	[1]
145-001	Coffee, in the bean	5,692	[1]
149-001	Hops	267	256
150-001	Tea, in bulk or packed in quantities of more than 5 kilograms.	5,331	58
151-001	Tea, in paper or cardboard packets	63	1
153-001	Yerba mate	2,251	[1]
Group 18	Spices	173	15
159-001	Cinnamon, whole	41	[1]
165-001	Pepper, whole	87	[1]
Group 19	Forage and animal feeds, n.e.s.	3	2
Group 20	Raw textile materials of vegetable origin	19,476	293
172-001	Cotton, crude, ginned or not	19,066	275
175-007	Henequen fibers and roots	37	[1]
-012	Sisal fibers, undyed	73	[1]
-013	Tampico fibers, undyed	36	3
-014	Zacaton fibers, undyed	55	[1]
-017	Jute fibers, crude and undyed	181	[1]
Group 21	Oleaginous vegetable materials, crude	56	[1]
182-010	Castor beans	40	[1]
Group 12	Tobacco, crude	3,048	2,758
183-001	Leaf tobacco, pressed or not	3,048	2,758
	All commodity groups, total	61,795	21,095
	Listed principal commodities, total	61,537	21,011
	Principal commodities as percent of total all commodity groups	99.6	99.6

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

In order to stem the rising tide of import requirements, the Chilean Ministry of Agriculture has prepared a program which is designed to make Chile eventually self-sufficient in wheat. The objective is to increase yields with improved farming techniques rather than to increase the area seeded. The program is based on the following projection of production and demand in the coming years:

Year	*Production*	*Demand*	*Deficit*
	(1,000 tons)		
1966	1,320	1,675	355
1967	1,345	1,720	375
1968	1,365	1,765	400
1969	1,390	1,820	430
1970	1,410	1,860	450

Bad weather during 1964-65 resulted in larger than usual imports of wheat in 1965 and 1966. Wheat imports totaled 277,751 tons in 1965, of which 171,483 tons were from the United States (43,533 tons under PL-480), and 106,268 tons from Argentina. An estimated 440,800 tons may be imported in 1966. This would include 45,512 tons purchased under PL-480 in 1965 scheduled to arrive in 1966, an additional shipment of 131,689 tons authorized by the 1965 PL-480 agreement, and 263,598 tons to be obtained from commercial sources and a new 1966 PL-480 agreement. Chilean wheat imports totaled 401,608 tons (26,087 from the United States) in 1963 and 222,410 tons (208,140 from the United States) in 1964. Imports from the United States included 12,151 tons under PL-480 title IV in 1963, and 19,562 tons in 1964.

The 1965 title I agreement also provides for the importation of 55,100 tons of corn, with most of this earmarked for the poultry industry. Only 14,326 tons were imported in 1964 under title IV. An estimated 12,825 tons were imported in 1965, while a total of 110,200 tons is forecast for 1966.

During 1964, Chile imported 15,313 tons of rough rice (almost all from Spain) into central Chile and 9,188 tons of milled rice (almost all from the United States) into the northern and southern free ports. About 27,550 tons (rough grain equivalent) was expected to be imported in 1965 (13,224 from the United States), and an equal amount is expected to be imported in 1966. Chile has not exported a substantial amount of rice since 1962 and is not expected to do so in the next few years.

The United States is no longer a leading supplier of cotton in the Chilean market. Mexico and Peru are now Chile's primary suppliers. The last year in which the United States registered substantial sales was 1963 when U.S. sales amounted to $4.3 million ($3.4 million under PL-480 title IV).

The bulk of tobacco used in domestic manufactures is grown in Chile, and import requirements are not expected to increase significantly in the next few years. Total imports of unmanufactured tobacco in 1963 were 2,308 tons and in 1964 were 1,403 tons. The United States supplied 1,632 and 1,241 tons in those years, with shipments under PL-480 (title IV) accounting for 353 and 661 tons. The October 1965 PL-480 agreement (title I) will supply 771 tons of

tobacco with the understanding that Chile import at least 441 tons from normal commercial sources, including 325 tons from the United States. Total imports in 1965 were expected to reach 1,433 tons, with 1,146 coming from the United States. On severance of trade relations with Cuba in 1964, Chile sought other sources for cigar tobacco. The Compania Chilena de Tabacos is the sole importer of unmanufactured tobacco: it supplies smaller firms with semifinished tobacco for the manufacture of cigars and pipe tobacco. The company is the sole producer of cigarettes and the only major producer of cigars and pipe tobacco.

Chilean brewers continue to depend entirely upon imported hops, since that crop is not produced commercially in Chile. Although the Government continues to set limits on beer production, output has seldom approached these production ceilings in recent years. Thus, 1964 production was only 43 percent of the quota. The Compania de Cervecerias Unidas has been alloted 97.3 percent of the 1965 quota, with the remainder assigned to 5 independent brewers. Hops imports in the years 1963-64 were 199 and 207 tons (gross weight) and were expected to total 240 tons in 1965. The United States is expected to continue as the principal supplier of hops.

The Government's program to increase livestock production should open possibilities for increased sales of seeds in development of pastures.

Chilean imports of unprocessed fruits, vegetables, food stimulants, spices, and oleaginous vegetable materials are almost entirely composed of tropical products.

Manufactured Food Products

After declining from a high of 12 percent of total imports at the beginning of the 1955-64 decade to 6 percent in 1960, manufactured food products have steadily grown in importance and represented 8.8 percent of all imports ($53.6 million) in 1964. The increases largely reflect the failure of domestic production to keep up with demand, particularly for sugar, meat, and dairy products. Imports of edible fats and oils have remained fairly stable in recent years, as have prepared and preserved foodstuffs which have actually registered declines because of the operation of import restrictions. Table 7 shows Chilean imports of manufactured food products, by commodity groups and principal commodities, total and from the United States in 1964.

Peru emerged as the leading supplier ($18.2 million) of manufactured foodstuffs in 1964 by supplanting Cuba as the principal supplier of sugar to Chile. Argentina followed closely in 1964, with sales averaging $10.6 million annually during 1961-64, owing to its position as the leading supplier of meat to the Chilean market.

Table 7.—Imports of Manufactured Food Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 24	Meats, including jerked and salted	8,257	8
184-002	Fresh or chilled beef	7,742	[1]
-006	Frozen beef	235	[1]
189-011	Edible offal	228	[1]
Group 25	Edible fats and derivatives	2,532	471
190-001	Edible fats	767	328
191-001	Lard	1,632	14
192-001	Margarine and its imitations	101	99
Group 26	Milk, cheese and butter	5,450	4,237
196-001	Condensed milk	154	[1]
197-001	Milk, pure, powdered	2,865	2,747
198-001	Butter or butter fat	2,362	1,450
199-001	Cheese, common	32	27
Group 27	Starch, flour or meal, and residues	3,074	2,909
202-001	Oats, hulled	50	50
-003	Cooked wheat	265	265
-005	Grain, crushed or semi-ground, n.e.s.	147	147
205-001	Cornmeal	360	360
206-001	Wheat flour, in packages of more than 5 kilograms	2,095	1,968
207-007	Flour and meals of grains, n.e.s.	74	62
Group 28	Edible oils	5,028	3,506
212-001	Cottonseed oil	69	31
-002	Sunflower or marigold oil	26	23
-003	Olive oil	39	2
-004	Soybean oil	2,869	1,534
-005	Edible vegetable oils, n.e.s.	257	149
-011	Semirefined vegetable oil for manufacture of edible oils	980	980
213-001	Coconut butter	353	352
-003	Butter, n.e.s., other than peanut	433	433
Group 29	Preserved and prepared foods	805	151
214-001	Cacao, ground, unsweetened	49	[1]
219-001	Preserved meat, n.e.s	42	8
220-001	Preserved fruits, sweetened	32	15
223-001	Preserved vegetables, leguminous, leafy and root	30	16
227-001	Preserved soups, n.e.s.	72	18
228-001	Chocolate, paste (nonconfectionery)	35	[1]
229-001	Chocolate, candies, and bonbons	88	7
230-001	Candies and confectionery, n.e.s.	68	10
231-001	Meat extracts and juices	117	[1]
-002	Meat extract, paste form	51	[1]
236-001	Powder, without gummy substances for pastry-making	38	29
Group 30	Sugar and derivatives	28,465	261
243-001	Raw sugar, 85% to 97% saccharose	26,132	246
245-001	Refined sugar, more than 98.5% saccharose	2,303	[1]
	All commodity groups, total	53,611	11,543
	Listed principal commodities, total	53,192	11,370
	Principal commodities as percent of total all commodity groups	99.2	98.3

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

The United States was a close third in 1964, and it boasted average annual sales of $10.5 million in the years 1961-64 consisting primarily of powdered milk, edible oils, and wheat flour—all strongly supported by PL-480 sales.

The United States is not a significant supplier of either sugar or meat, the two largest groups in this category. The Chilean Government's desire to replace expensive beef imports with a cheaper source of protein, and the decline in local production of beef and veal resulting from poor weather in the spring of 1965 resulted in the first significant imports of frozen chickens in recent years by the ECA—perhaps 2,755 tons, with about 90 percent coming from the United States. Reduced cattle and beef imports from Argentina has lead to the imposition of a ban on beef sales Monday through Thursday.

Chile imports edible vegetable oils to cover shortfalls in domestic production. The imports are derived mainly from rape and sunflower seeds. Imports of crude, semirefined, and refined edible vegetable oils totaled 26,228 and 15,953 tons (refined basis) in 1963 and 1964, respectively, and were expected to total 17,066 tons in 1965, with about 5,510 tons of this refined.

Refined vegetable oil imports are permitted only into the freeport areas. The largest U.S. sales item in this category was soybean oil, and PL-480 title IV sales accounted for about 75 percent of its value. The 1965 title I agreement did not include a PL-480 soybean oil component. It did provide for the importation of 1,102 tons of butteroil and stipulated that Chile would take, in addition 5,510 tons of butter, butteroil or anhydrous milk fat in 1965. The United States supplies less than a fifth of Chile's importation of edible fats and their derivatives: Argentina supplies more than three-fifths.

The United States accounted for nearly 80 percent of Chile's dairy product imports, primarily through its sales of powdered milk and butterfat, with the latter supported in part by PL-480 title IV sales. The 1965 PL-480 title I agreement called for the importation of 4,408 tons of powdered milk from the United States, and it was thought that Chile would require an additional 12,122 tons of commercial imports.

A considerable portion of Chile's wheat flour imports from the United States was supported by PL-480 sales.

Beverages and Manufactured Tobacco

Importations of beverages and manufactured tobacco products have been negligible in past years because of substantial domestic production of such products and restrictions on the importation of nonessential goods. Table 8 combines these two major Chilean tariff categories to show Chilean imports of beverages and manufactured tobacco, by commodity groups, total and from the United States in 1964.

Table 8.—Imports of Beverages and Manufactured Tobacco, by Commodity Groups, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 31	Wines	23	[1]
Group 32	Spirits and liqueurs	334	16
Group 33	Beer and cider	1	[1]
Group 34	Mineral waters and other nonalcoholic beverages	35	17
Group 35	Prepared tobacco	3	2
Group 36	Cigars and cigarettes	31	23
	All commodity groups, total	427	58

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Manufactured Textiles

The textile industry, one of Chile's oldest and most highly developed, supplies by far the greater part of the country's demand. Most imported textile manufactures are either prohibited entry into most of Chile or are subject to high customs charges. While the domestic industry constitutes a sizable market for imported raw materials, such as cotton, wool, and synthetic materials, textile manufactures constitute a quite small import category. In only one year of the 1955-64 decade did they constitute more than 4.5 percent of total imports (1962: 6.2 percent), and they represented only 2.7 percent in both 1963 and 1964. Table 9 shows Chilean imports of textile products, by commodity groups and principal commodities, total and from the United States in 1964.

Hemp or jute bags, cord fabric for the manufacture of tires, and men's and boys' madeup clothing of cotton and wool, together represented more than 50 percent of textile imports in 1964. Most of these items (except for sacks for the nitrate and fishmeal industry) are imported into the Valparaiso-Santiago area, but a very high proportion of products, such as yarns, trimming, and nonwool wearing apparel, flow primarily into the free ports. Many such imports are prohibited entry into the rest of the country or are subject to severe import charges. The sharp decline in the importation of wearing apparel from $11.5 million in 1961 to $3.6 million in 1964 reflects the increasing severity of those restrictions.

The United States, during the past decade, has been the principal supplier of manufactured textiles to the Chilean import market, maintaining its position in recent years by virtue of its sales of cord fabric for the manufacture of tires and wearing apparel (primarily men's and boys' made-up wool clothing). India's growing sales of sacks, particularly to the nitrate and fishmeal industries, have boosted it to the position of second supplier, while the United Kingdom and the

Table 9.—Imports of Textile Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 37	Yarns	1,900	189
276-002	Artificial silk yarns, rayon, single strand	852	70
-005	Nylon yarns, single strand	206	19
-006	Acetate yarns, single strand	76	51
282-001	Threads and yarns of cotton, n.e.s.	62	13
289-002	Threads and yarns of artificial silk	395	2
-005	Threads and yarns of nylon	193	16
-006	Threads and yarns of glass, n.e.s.	33	2
Group 38	Cordage	596	94
294-001	Cordage and cord of hemp or manila, weighing 75 to 600 grams per 10 meters	56	1
299-001	Cordage and cord of hemp or manila, weighing over 600 grams per 10 meters	237	20
299-011	Twists of nylon or other artificial fibers, weighing over 600 grams per 10 meters	265	63
Group 39	Fabrics	3,441	2,486
306-001	Oilcloth and linoleum for floors	40	3
330-001	Damasked fabrics, of cotton, for bedspreads, etc.	30	[1]
358-001	Cord fabrics, of cotton or rayon, for manufacture or repair of tires	2,373	2,335
	Cotton fabrics, unbleached, plain, n.e.s., with or without mixture of hemp, jute or other similar fibers or containing linen or wool in a total proportion not exceeding 10%, weighing 80 grams or more per square meter, and having 27 threads or less in an area 5 millimeters square:		
363-001	Unbleached grey cloth (tocuyo)	23	18
-017	Bleached, n.e.s., other than linen, organdy, piqué, and poplin	65	24
-023	Percales and percalines	32	13
-028	Dyed or printed, n.e.s., other than cretonne, organdy, piqué, or poplin	105	27
	Fabrics, n.e.s., of wool or of vegetable fibers, containing more than 10% of wool, with or without threads of base metal:		
392-001	Weighing per square meter, up to 250 grams	73	[1]
393-001	Weighing per square meter, more than 250 grams	157	2
395-001	Containing up to 20% silk	42	[1]
396-001	Containing 20% to 80% silk	40	4
397-001	Containing 80% or more silk	30	25
Group 40	Bags and packings	3,823	74
	Empty bags, of hemp or jute:		
419-002	For grain	534	[1]
-003	For minerals or metals	144	1
-004	For potatoes	198	[1]
-005	For nitrates	1,343	[1]
-006	For other products	1,576	73
Group 41	Trimmings and ribbons	110	37
428-001	Cotton ribbons	31	11
438-001	Cords of wool, containing 80% or more silk	53	16
Group 42	Wearing apparel	3,555	2,367
492-001	Cotton shirts, for men or boys	261	13
554-001	Umbrellas, containing silk	44	[1]
567-001	Madeup clothing of fabric waterproofed by means of rubber or its substitutes, containing silk	31	15
568-001	Knitted cotton underwear	46	8
	Madeup clothing, n.e.s., for men or boys, and detached parts thereof with needlework:		
580-001	Of cotton	838	726
584-001	Of wool	1,252	1,143
587-001	Containing less than 80% silk	62	27
	Madeup clothing, n.e.s., for women, girls or infants, and detached parts thereof with needlework:		
589-001	Of cotton, with or without ornaments of cotton or other materials, not being insertions, lace or embroideries	420	258
590-001	Of cotton, ornamented with insertions, lace or embroideries of cotton or other material	88	1
591-001	Of cotton, with ornaments or embroideries containing silk	28	26
595-001	Of wool, with or without ornaments of wool or other materials	143	37
597-001	Containing less than 80% silk	100	55
Group 43	Household wares of textile materials	305	76
632-001	Carpets and floor coverings of wool and other materials, n.e.s., other than of hemp or similar fibers, animal hair, cotton, looped wool, linoleum or oilcloth	73	17
669-001	Cotton tablecloths, napkins, and table linen sets, with embroideries or lace, except silk	43	1
683-001	Towels, up to 1 meter square, of cotton	43	4
Group 44	Manufactures of textile materials, n.e.s.	493	438
698-001	Filters with or without parts of other materials	430	411
	All commodity groups, total	14,223	5,761
	Listed principal commodities, total	13,166	5,551
	Principal imports as percent of total all commodity groups	92.6	96.4

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000 or imports from the United States exceed $15,000.

Items reported as containing silk probably include artificial silk or silk substitutes.

Federal Republic of Germany (West Germany) follow closely with sales scattered throughout the various subdivisions of textile manufactures.

In addition to cotton, the industry's principal raw material imports are sulfite-grade chemical pulp, rayon-grade caustic soda, dyes, titanium dioxide, and lead. There are two cellulosic rayon and two noncellulosic nylon (polyester) fiber producing plants. Production of manmade fibers in 1964 was 11.5 million pounds, as follows: rayon-acetate yarn, 4.3; rayon-acetate staple, 5.9; and noncellulosic yarn, 1.3.

The industry is composed of two main groups: spinning and weaving mills turning out 80 percent of total production; knitting mills, 15 percent; and manufacturers of sewing thread, rope, sacks, twine, cotton and elastic ribbons, 5 percent. Installed capacity for 1964 was 362,000 spindles and 9,500 looms.

Continuous filament and staple fiber are produced in Chile by the viscose process. Cupramonnon for mixing with wool and synthetic fibers, such as Dacron and acrilan, is imported in limited quantities. Production consists of solid-colored fabrics, patterned and print pure rayon fabrics, mixed rayon and cotton fabrics, and mixed rayon and wool fabrics. Both piece goods and trimmings are produced.

The major part of the spinning equipment in the carded wool, linen and jute factories antedates World War II. The same is partially true of the weaving machinery used in the wool, rayon, and jute industries, and of most of the equipment in knit goods plants. Equipment in the cotton textile industry is generally much more modern. The same is true for the combed wool, silk hosiery, and ribbon segments of the industry.

Chemicals and Related Products

Chemical products are ordinarily among the three most important Chilean import categories, usually surpassed only by machinery and transportation equipment, except when poor crop years result in large imports of unmanufactured agricultural products. During the 1955-64 decade, chemicals accounted for as much as 17.4 percent of total imports and as little as 8.9 percent, usually ranging between 12 and 15 percent.

The United States has traditionally been the principal supplier of chemical products to the Chilean market, accounting for more than 50 percent of such sales each year through 1960. The U.S. share of the market has declined in recent years, while West Germany has experienced the most significant growth in sales. In 1964, the United States claimed 42 percent of the market, while West Germany averaged 20 percent for the years 1963-64—a rapid climb from the mid-1950's when it claimed less than 10 percent of the market. The United Kingdom has usually occupied the third position with a rather steady 7 percent of chemical imports. Table 10 shows Chilean imports of chemicals and related products, by commodity groups and principal commodities, total and from the United States in 1964.

The Chilean chemical industry is comprised of two principal groups. The first is based upon the mining and processing of chemical raw materials from Chile's ample resources of copper, nitrates, iodine, limestone, salt, borax, sulfur, and other minerals. The second has become the fourth most important industry in Chile, producing industrial chemicals, drugs and medicines, paints and varnishes, and allied chemical products. The majority of chemical plants are small, but there are several large and important installations producing explosives, pharmaceuticals, botanicals, fertilizers, and soaps and detergents. By far the largest part of output from this group is derived from the production of soaps and detergents, pharmaceuticals, and paints and varnishes. Industrial chemicals probably account for about 20 percent of output.

The chemical industry draws its raw-material needs primarily from the by-products of the steel (napthalene, benzols, and anthracene), sugar beet refining (ethanol and acetic acid), and petroleum (paraffin, liquid gas, and synthesized gas) industries, and from the processing of sulfur and sodium chloride.

Chile is now moving briskly toward the establishment of a petrochemical industry following the completion of a feasibility study by the Fluor Corporation in late 1965. This expansion aims at supplying the domestic market—petrochemical imports exceeded $22 million in 1964—but also assumes access to the LAFTA market. The plan involves projected investments of about $110-$120 million—half to be supplied by the State and the remainder by domestic or foreign capital—and envisages the construction of the following installations (millions of dollars):

Ethylene complex	$ 8.0
Sodium chlorite	6.0
Polyethylene	8.0
Derived chlorides	5.0
Polyvinylchloride	3.5
Acetaldehyde and derivatives	30.0
Ammonium complex	
Ammonia	20.0
Fertilizers	15.0
Aromatic complex	
Aromatic separations	4.0
Phthalic anhydride	3.5
Phthalic plastics and resins	1.0
Resins and polyester chips	6.5
"Caprolactoma"	11.0

Increased Chilean production of petrochemicals is not expected to diminish overall U.S. sales but should create markets for more diversified products. The only identifiable categories for which the United States supplies more than a million dollars, and which are potential targets for substitution, are fertilizers, synthetic resins, carbon black, and synthetic rubber. Only

Table 10.—Imports of Chemicals and Related Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 45	Chemicals	22,881	7,300
712-001	Acetone	35	11
718-001	Citric acid	83	2
722-001	Phosphoric acid	56	41
731-001	Amino acids	49	22
713-001 to 731-001	Acids, n.e.s.[1]	122	38
732-024	Ergotoxine and alkaloids of rye ergot	49	22
732-003 to -050	Alkaloids and their compounds, n.e.s., other than theobromine[2]	311	30
733-001	Caffeine	46	2
736-001	Butyl alcohol	35	16
737-002	Octyl alcohol	181	133
738-001 to -011	Alcohols, n.e.s., other than allyl, benzyl, capryl, cetyl, cinnamic, propyl, and absolute ethyl	285	125
750-001	Aluminum hydroxide	24	24
751-001	Amyl acetate	44	44
-011	Dibutyl phthalate and dibutyl maleate for industrial use	109	[3]
752-021	Methyl methacrylate monomer	306	173
754-001	Anhydrous ammonia, in cylinders	57	15
758-001	Ammonium hydrochlorate or chloride	114	87
-002	Ammonium nitrate	1,765	153
-003	Ammonium sulfate	36	1
762-014	Salophene	31	[3]
764-007	Aspirin	218	89
761-001 to 764-030	Analgesics, anesthetics, antipyretics, sedatives, and compounds, n.e.s., other than chloral and chloroform[4]	812	102
771-011	Freon gas, in iron cylinders	185	73
-021	Gases for medical or industrial use, other than sulfurous anhydride, not specified	80	35
773-011	Phthalic, maleic, tetrahydrophthalic and trimethylic anhydrides for industrial use	107	24
781-002	Glucose	27	23
783-001	Sulfur, whole, ground or sublimated	525	[3]
799-002	Calcium carbonate, pure	49	9
800-002	Calcium phosphate, pure	70	45
809-002	Toluene	43	41
-003	Xylol	38	35
-004	Dodecylbenzene	115	115
-011	Styrene monomers	254	250
-010	Hydrocarbons, n.e.s., other than naphthalene, unsaturated acyclic hydrocarbons and xylene	126	125
824-001 to -008	Diastases and vitamins	588	207
832-011	Vinyl acetate monomers	160	8
838-002	Cresol	61	56
-011	Biphenyl, butylphenol and amylphenol for industrial use	30	[3]
847-001 to -018	Glycosides, opotheraputics and various extracts	1,186	166
-021	Concentrated bile	22	20
-031	Penicillin	205	9
-033	Streptomycin	100	1
-034	Terramycin	180	[3]
-035	Acromycin	33	33
-036	Chloramphenicol	43	[3]
-040	Antibiotics, n.e.s.	1,387	267
-041	Levorotatory compounds for the synthesis of chloromycetin	207	118

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 45—continued			
-051	Methyldichloroacetate, pure or synthetic	229	2
869-011	Magnesium hydroxide	45	45
905-001	Litharge of lead	18	18
908-007	Caustic potash	56	19
910-002	Potassium chlorate, impure	1,148	563
923-002	Sodium bichromate	199	38
-003	Sodium chlorate, pure	47	2
-004	Sodium phosphate	291	131
-006	Sodium tripolyphosphate	331	197
924-003	Calcined sodium carbonate	350	1
-004	Caustic soda, impure	1,134	109
929-001	Sodium cyanide	221	184
930-001	Sodium hydrosulfite	75	[3]
944-001	Urea	64	[3]
954-001	Acids, not specified	39	2
-002	Acetates, not specified	72	37
-004	Antihistamines	121	69
-005	Optical bleaching agents	154	1
-007	Chlorohydrates, not specified	125	30
-008	Developed colors	47	2
-009	Compositions for coloring plastics	56	23
-010	Silicon dioxide and silicates	121	67
-013	Additives for lubricants and oils	536	152
-014	Synthetic resin latex	89	11
-016	Oxides, not specified	129	1
-017	Plasticizers	509	178
-018	Preparations for fluorescent tubes	75	57
-019	Ion exchangers	42	30
-020	Water-treating products	118	113
-021	Products based on lignosulfonates	33	32
-022	Resins, stabilizers and additives for the same	97	23
-023	Silicones	43	26
-024	Surface-active agents such as emulsifying and wetting agents, and detergents	299	74
-999	Chemical products, not specified	4,321	2,006
Group 46	Medicinal drugs, pharmaceuticals and toilet preparations	7,408	2,769
961-011	Gauze and dressings for medical use	152	91
968-001	First-aid kits	70	69
972-001	Gelatin capsules for medicines, empty	154	146
973-001	Charcoal, vegetable, in powder	96	40
977-001	Catgut and similar products for sutures	65	16
994-011	Antituberculin drugs, not specified	49	[3]
1001-001	Medicinal extracts, not specified	52	14
1009-001	Medicines in the form of drops (accompanied by dropper)	36	12
-002	Injection solutions, not specified	155	55
1011-001	Powdered flours and preparations, without powdered milk, for feeding infants or invalids	26	25
1014-001	Hypodermic injections, in ampoules, not specified	535	198
-011	Aureomycin for hypodermic injections	118	12
-014	Terramycin for hypodermic injections	182	[3]
-020	Antibiotic injections, n.e.s., other than streptomycin, penicillin, acromycin and chloromycetin	219	32
	Pastilles, comprimes, tablets, tabloids, pills, drops, capsules, etc.:		
1032-001 to -010	Medicines, other than antibiotics	316	117
-015	Streptomycin	50	19
-019	Acromycin	70	70

Table 10.—Imports of Chemicals and Related Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
1032-014, -016, -017, and -030	Antibiotics	528	247
1037-002	Insecticides	1,475	458
-003	Parasiticides	678	194
-005	Sheepdip	34	[3]
-006	Herbicides	496	112
-021	Chemical pest control products, n.e.s., other than for use against birds or rodents	305	60
1038-001	Pomades and ointments, medicinal	38	18
1039-001	Albuminous edible preparations	26	26
1042-003	Biological serums similar to antidiphtheric or antistreptococcic serums	145	1
1043-001	Cow vaccine, for injection	146	112
-002	Bacteriological cultures for injection	31	2
1047-001	Adhesive tape	76	51
1051-001 and -003	Petrolatum and similar products	56	47
1055-001	Pharmaceutical products, not specified	179	85
-011	Pharmaceutical products and chemical mixtures, for use in manufacture of pharmaceutical products	489	301
-012	Vitamin mixtures for enriching bread	59	[3]
-021	Mixtures of dosed chemical products for additives to animal foods as stimulants to good assimilation	26	22
Group 47	Artificial fertilizers	10,368	6,558
1056-001	Phosphate fertilizers	2,278	1,379
-002	Potassic fertilizers	53	[3]
-003	Superphosphate fertilizers	4,516	4,499
-005	Dicalcic phosphate	1,906	[3]
1057-001	Potassium chloride	47	[3]
-002	Thomas' slag	312	[3]
-006	Potassium sulfate	601	264
-007	Nitrogenous artificial fertilizers, n.e.s.	246	173
-008	Potassic artificial fertilizers, n.e.s.	279	121
1059-001	Calcined bone or bone ash	130	123
Group 48	Explosives, matches and other pyrotechnic articles	1,737	904
1061-001	Dynamite	142	135
-005	Explosives similar to dynamite, except gelatin	290	290
1064-001	Percussion caps	419	56
-002	Detonators for explosives	156	54
1065-002	Cords, for use in mines	562	251
-003	Fuses, for use in mines	35	[3]
1066-001	Pyroxyllin and similar material	116	116
Group 49	Blacking, resins, and industrial fats and oils	16,664	7,113
1072-001	Mineral oil lubricants	1,812	1,515
-002	Mineral oil for industrial use	184	173
-011	Mineral oil for machines, imported in tankers	2,296	1,532
1073-001	Pine oil, called flotation, for concentrating ores	79	71
1074-006	Tung oil	49	[3]
-010	Palm oil	81	62
1075-001	Unrectified turpentine oil	90	20
-002	Substitutes for unrectified turpentine oil	84	47
1077-001	Tar or pitch, mineral	148	135
-011	Natural asphalt such as rafaelite	523	194
-012	Mineral tar or pitch imported by the Ministry of Public Works	172	157
1079-001	Benzine and motor gasoline, for engines, imported in tankers	533	[3]
-002	Benzine and motor gasoline, for aviation	53	[3]
1083-001	Mineral wax, melting at 60° C. or over	80	70
1085-001	Colophony (pine rosin)	403	6
1087-002	Gum arabic	39	8
-005	Gum-lac	35	1
-010	Natural gums, n.e.s., other than mastic, copal, tragacanth, or gums and resins for making sweets	64	47
-012	Synthetic resins	6,042	1,481
-013	Nitrocellulose pyroxyllin	102	72
-014	Polyamides and super polyamides, in powder and granules	36	[3]
-015	Polyamides, in paste, without coloring	35	[3]
1089-001	Lubricating greases, containing more than 50% of mineral oil	616	541
1091-001	Cocoa butter, n.e.s.	285	[3]
1093-001	Paraffin wax, melting at under 60° C.	1,152	820
1095-001	Rectified petroleum for illuminating purposes, in tankers	1,473	61
Group 50	Industrial alcohols	116	114
1099-002	Industrial methyl alcohol	115	113
Group 51	Colors, varnishes, inks, and dyestuffs	6,517	1,516
1102-001	Alizarine	35	[3]
-002	Aniline	2,682	53
-005	Organic pigments	55	1
-011	Coal dyes, dispersed in paste	167	1
-012	Dyes for the textile industry such as acromine	50	[3]
1110-001	Varnishes, n.e.s., other than ordinary or for painting ships	51	21
1112-003	Titanium dioxide	916	28
1113-001	Animal charcoal	23	20
-002	Carbon black	1,128	955
-003	Mixtures of masterbatch and carbon black	53	47
1118-001	Royal yellow (*amarillo de rey*), for making paints	33	[3]
-003	Oxides of chrome, for making paints	70	1
-006	Colors and earths, n.e.s., other than coal dyes or ochres	143	20
-007	Pigments, orange, and chromium molybdate	34	[3]
1121-001	Barium sulfate	71	3
1123-001	Paints, in oil or water paste	30	2
-011	Liquid oil paints, not specified	120	35
-012	Liquid water paints, not specified	27	15
1124-001	Copper paint for ship bottoms	133	63
1125-002	Enamels	44	22
1126-001	Artists' paint, for oil or water painting	48	3
1127-001	Metallic powders for bronzing, etc.	47	4
1129-002, -004	Paint dryers, not specified	57	[3]
1130-001	Printing ink, liquid or solid	138	120
-011	Auxiliary chemical products for printing, not specified	22	19
1132-002	Special ink, for machines	44	3
-004	Ink, for writing, in paste or powder	31	1

Table 10.—Imports of Chemicals and Related Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 52	Soaps and candles	119	39
1138-032	Soaps, in powder, without perfume	47	28
Group 53	Other chemical and industrial products	12,944	6,623
1144-001	Cresylic acid, for concentrating ores	1,788	1,671
-002	Ethyl acetate, for concentrating ores	253	244
-004	Mixtures of chemical products, for concentrating ores, other than mixtures with a base of xantate or pentasulfur	612	581
1150-001	Chemical charges for extinguishing fires	155	55
1151-001	Casein and products with a casein base	50	1
1156-001	Compositions and cements for gluing	74	49
-011	The same, in containers of more than 1 kilogram net capacity	218	159
-013	Prevulcanized latex for automatic bottle closures	91	[3]
1157-011	Auxiliary chemical products for the rubber industry, not specified	481	148
1158-001	Soldering compositions	77	76
1159-001	Insulation compositions	36	30
-011	Chemical products for preserving eggs	55	21
-021	Auxiliary chemical products for metallurgy, not specified	43	15
1160-001 to 1161-002	Rennet	116	25
1162-011	Auxiliary chemical products for tanneries, not specified	261	82
1166-009	Essence of bergomot and lime	155	3
1166-001 to -021	Essences or essential oils, fruit extracts, flavors, alcoholates and ethers, n.e.s., for industrial uses[5]	1,220	593
1167-001	Essences and extracts for the manufacture of brandy, whisky, etc.	41	[3]
1168-001	Stearin	38	1
1169-001	Quebracho extract	1,074	3
1169-002 to -007	Tanning extracts, n.e.s.	158	13
1170-001	Bakelite and similar products	52	20
-002	Celluloid and similar products	51	[3]
1170-011	Mouldrite and other plastic products	895	355
-021	Cellulose, in powdered form	56	56
-031	Flexible sheets of vinylic and similar resins	595	456
-004	Plastic materials, n.e.s., other than galalith, synthetic resins for increasing resistance, flexible strips of butyral polyvinyl, and gelatin for repairs	76	10
1172-001	Glycerine, colored, for manufacture of explosives	91	56
-002	Ethylene glycol for manufacture of explosives	152	146
1175-001	Cocoa oil for industrial use	363	[3]
-004	Crude palm oil	151	[3]
1176-001	Sodium hyposulfite for photography	31	[3]
1178-001	Yeast and leavenings	84	56
1180-004	Chemical pulp for manufacture of paper	304	10
-005	Woodpulp for manufacture of synthetic yarn	1,397	1,397
1182-001	Pastes and other prepared materials for cleaning, stain-removing, polishing, and lubricating	150	127
1183-001	Chemicals for photography, not specified	74	30
1184-002	Inedible beef tallow and grease, crude	461	1
1185-011	Auxiliary chemical products for the textile industry, not specified	612	52
1186-001	Thermite solder	45	1
1188-011	Color-changing, chemically-coated paper or plastic for indicating chemical, temperature changes, etc.	59	7
	All commodity groups, total	78,754	32,936
	Listed principal commodities, total	76,618	32,287
	Principal commodities as percent of total all commodity groups	97.3	98.0

[1] Exclusive of 718-001, 722-001 and 731-001 above.
[2] Exclusive of 732-024, above.
[3] Equals zero or less than $1,000.
[4] Exclusive of 762-014 and 764-007, above.
[5] Exclusive of 1166-009, above.
Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.
Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

the first two are likely to be produced in Chile in the near future. Fertilizers represent a special case, since Chilean agricultural policy calls for consumption much in excess of planned production.

A primary source of raw materials for some of the planned chemical installations will be natural gas produced in Magallanes Province where reserves are estimated to total 105 billion cubic yards. Butane, propane, and natural gasoline are now recovered, but the residual gas—composed of methane (94 percent), ethane (5 percent), and heavy carbons and nitrogen (1 percent)—is now reinjected. This could support an ammonium plant with a capacity of 1,102 tons per day, and a 55,100 tons-per-annum ethylene plant which would provide feedstock for an acetaldehyde plant.

A second major source of raw materials is petroleum by-products from the ENAP refinery at Concon which processes about 10.500 cubic yards of petroleum per day, and the new ENAP refinery near Concepcion which will process about 7,500 cubic yards of petroleum daily. The following refinery products are a potential source of raw materials for the petrochemical industry:

1. Catalytic reformed gases rich in hydrocarbons (often as high as 50 percent) total perhaps 255,000 cubic yards per day. Though used mostly as a substi-

tute for fuel oil, these gases are possible sources of supply for hydrogenation.

2. Reformed products rich in aromatic hydrocarbons are used to increase the octane ratings of gasoline. These same products could yield benzene, toluene, and xylene which, in turn, could be used to produce products such as nylon and polyester fiber. Output of reformed products should total about 8,400 barrels daily.

3. Cycle and decanted oils, now burned as fuel oil, could serve as a future source of carbon black.

4. Naphtha and topping gasoline, which are presently slated for the production of automobile and aviation gas and solvents, could be diverted for petrochemical projects—perhaps 229,000 to 440,000 tons per year.

5. Cracking gases (35 percent ethane and ethylene) which form a potential capacity of 91,600 cubic yards per day currently serve as refinery fuel. This represents a potential output of 7,700 tons of ethylene per year for each refinery.

6. Ethylene, from a plant to be constructed in the Concepcion refinery complex, should supply the domestic market until 1971 with 33,000 tons annually. Subproducts generated from the processing of light naphtha from the topping plant will include liquid propane gas, gasoline, heavy oils, and fuel gas. Such gasoline could be the source of aromatics for ester extraction plants. In addition, the ethylene plant can be modified for the production of other olefines, such as propylene, butylene, and aromatics.

The coking process carried out by CAP yields tar (27,550 tons per year), benzene (5,500 tons per year), toluene (770 tons per year), and xylene. Tar is now sold for weather proofing, and the remaining products as solvents. These products are available in insufficient quantity and are too costly to justify in themselves the creation of a petrochemical industry, but they could supplement an aromatic extraction plant.

Chile's great reserves of sodium chloride (often reaching 99.2 percent in purity) could, by electrolysis, yield caustic soda and chlorine. The latter would be available for the production of vinyl chloride. Until now, the production of caustic soda has grown slowly because of the inability to find a use for the chlorine generated by its production. Developed sulfur resources are currently both expensive and inadequate, but additional supplies could be provided by more intense exploitation of northern sulfur deposits and pyrite roasting.

Chemicals

This group—roughly equivalent to what are usually termed industrial chemicals (including raw materials for the manufacture of pharmaceuticals)—is now the largest ($22.9 million in 1964) of nine groups included in the statistical category, Chemicals and Related Products. Since 1959, it has represented no less than 24 percent of such imports and as much as 29 percent in 1962. Raw materials for the manufacture of pharmaceuticals probably constitute between a fifth and a fourth of chemical imports.

As in other chemical categories, the United States has lost ground in the Chilean market but remains the leading supplier with 31.9 percent of the import market in 1964. Imports from West Germany (19.4 percent in 1964), the United Kingdom (10.5 percent), and France (10.0 percent) have increased steadily.

The only individually specified items which totaled more than $1 million in 1964 were ammonium nitrate, impure potassium chlorate, and caustic soda. This reflects the current limited requirements of Chilean industry and the country's ability to meet most current needs for acids (particularly sulfuric, nitric, hydrochloric, acetic, formic, boric, and tartaric), alkalis (including soda ash, sodium carbonates, and, to a lesser extent, caustic soda), as well as many other important compounds of calcium (chloride), sodium (including sulfate, sulfides and silicate), potassium (nitrate), and phosphorous. Plans are underway for expansion of sulfuric acid production, mainly in connection with growth of the mining industry. Increased production of soda awaits development of an economic use for chlorine generated by electrolysis of sodium chloride. In addition, Chile supplies all her requirements for industrial gases except freon, and is virtually self-sufficient in the raw materials for the production of industrial gases.

The plastics industry in Chile is thought to have made considerable progress in recent years, but data on the manufacture of both raw materials and finished products is difficult to obtain. However, it is known that there is increasing production of polyethylene, polyvinyl acetate, polystyrene, and a variety of synthetic resins.

Medicinal Drugs, Pharmaceuticals, and Toilet Preparations

This category—medicinal drugs, pharmaceuticals, and toilet preparations—includes veterinarial preparations and pesticides. While imports have been subject to fairly sharp fluctuations in recent years, the trend has been upward, at a rate roughly equaling or exceeding that for total chemical imports. The United States share of this market has registered a sharp decline from 68 percent of such imports ($3.03 million) in 1957, to 37.4 percent ($2.8 million) in 1964. West Germany has been the greatest gainer during this period.

At present, there are over 45 large modern Chilean plants, some with the most up-to-date equipment, producing various high quality pharmaceuticals and

toiletries. Many well-known U.S. and European laboratories have branches in Chile or have their products manufactured under license by Chilean domestic producers. There are probably 9 large firms producing antibiotics in Chile, all located in Santiago, and about 20 smaller companies which buy them in bulk and repack for local distribution. Special antibiotics, serums, anesthetics, and vaccines are imported directly by the National Board of Health (Servicio Nacional de Salud).

The use of insecticides, herbicides, and fungicides in Chile is still restricted primarily to the large well-managed farms and fruit growers. Few of the small farmers, who represent the majority of farmers, use these materials. There is growing evidence that modern farming techniques and improved transportation are producing a moderate increase in consumption, which is reflected by an increase of at least $2 million in 1964 from the estimated $1 million in imports of such products in 1960.

At least 450 different pesticides are used in Chile. There are probably no more than a half-dozen producers of pesticides, plus an equal number who repack imported products. Production is more or less limited to products based on sulfur, lime, and copper. Fungicides accounted for an estimated 88 percent of total consumption (8,375 tons of active product in 1962). Ninety-five percent of this was derived from domestically produced sulfur. Recently, production has been adversely affected by the short supply of sulfur. The market for herbicides is limited principally because of the small amount of dispersal equipment in use and the small farmer's lack of capital. However, the Government and agricultural societies are providing increased technical aid to farmers.

While U.S.-manufactured pesticides are considered in Chile to be of high quality and great efficiency, they have not always fared well in price-competition with European suppliers.

Artificial Fertilizers

Although Chile produces sufficient sodium and potassium nitrates to meet domestic demand and to export as well, it must import other fertilizers, such as phosphates, ammoniated fertilizers, and meat- and bone-meal to meet other requirements of its soils. Fertilizer imports have grown more rapidly than any other group in the chemical products category. They totaled only $2 million in 1957, 3.9 percent of all imported chemicals, but averaged $12 million annually in the years 1963-64, 13.6 percent of such imports. Greatly increased consumption of phosphatic fertilizers, particularly superphosphates, is responsible for this increase. The United States has supplied most of the increase, with the result that it accounted for 63.4 percent of all fertilizer imports in 1964, compared with 12.6 percent in 1957.

The Chilean Government has become increasingly concerned about both the slow growth of its agricultural sector and the resulting importation of an estimated $70 million annually of foodstuffs and feeds in which it was once self-sufficient. One of its objectives is to boost production by bringing about a substantial increase in the use of fertilizer. Only 13 percent of Chile's 48 million acres of land capable of supporting agriculture was fertilized in 1964. Furthermore, Chilean agronomists estimate that the consumption of phosphates in 1963 (84,922 tons phosphate content), amounted to slightly less than half the optimum level of consumption.

To give immediate support to this program, AID concluded a $3.6 million loan with the Chilean Government to finance the importation of 48,500 tons of triple-superphosphates for use in the 1966 crop season. CORFO is considering the construction of a $10 million triple-superphosphate plant which could be producing 66,000 tons annually by 1968 and 132,000 tons sometime thereafter, in addition to a maximum of 11,000 tons annually from other domestic sources. Nevertheless, it is estimated that Chile will still have to import at least 84,900 tons of phosphates annually until the new plant reaches full capacity if it is to maintain or increase per capita agricultural output.

Explosives, Matches, and Other Pyrotechnics

Chile's explosives industry supplies nearly all of the country's industrial needs—which are substantial because of the mining industry's requirements—and exports moderate amounts. All of the country's requirements for matches are met by the domestic industry. Imports in this category have grown modestly in recent years, but totaled only $1.7 million in 1964, with detonating materials about four-fifths of the total. The United States has been the leading supplier of this market since 1961, usually followed by the United Kingdom. Most of the raw materials for the explosives industry, particularly sulfur and nitrates, are obtained locally.

Blacking Resins, Industrial Fats, and Oils

Until 1961, this group, comprised mainly of refined petroleum products, represented the leading importation into Chile of chemicals and related products. By 1960, ENAP had more than doubled the refining capacity of its Concon installation of Valparaiso, which

had gone into production in 1954. A ENAP refinery on San Vicente Bay near Concepcion is expected to nearly double Chile's refining capacity.

This additional production should be sufficient to meet Chile's projected demand for gasoline, kerosene, and diesel fuel up to 1970, although it will still be necessary to import fuel oil. In 1964, ENAP claimed to have supplied all of the country's requirements for automotive and aviation gasoline and liquid propane gas, 85 percent of its diesel fuel and kerosene, and 60 percent of its fuel oil. Chile does not now produce a number of products, such as asphalt, waxes, and lubricants. However, lubricating oils and greases are blended locally from imported materials.

Three distributors operating as concessionaires—COPEC; Esso Standard Oil Co. (Chile), S.A.C.; and Shell, Chile, Ltda.—share the market for petroleum products. There is free competition for indent business, and there are many importers of lubricating oils and greases.

The United States has for many years been the leading supplier of these products to the Chilean market but has experienced a decline in its share of the market to 42.6 percent in 1964 from more than 90 percent in the early and mid-1950's. In recent years, West Germany and the Netherlands Antilles have provided the United States with increasing competition, supplying 22.4 percent and 13.5 percent of the market, respectively, in 1964.

Industrial Alcohols

Chile is self-sufficient in the production of ethyl and butyl alcohol but must supplement its production of methyl with small imported quantities. Even smaller amounts of amylic alcohol are regularly imported, as are other industrial alcohols from time to time. The United States supplied $114,000 out of $116,000 in imports of industrial alcohols in 1964.

Colors, Varnishes, Inks, and Dyestuffs

This has been the sixth largest group among chemical imports since 1958. Three items—aniline, carbon black, and titanium dioxide—accounted for 71 percent of this group in 1964. West Germany overtook the United States as the leading supplier of such products in 1959 and has since supplied between 30 and 36.6 percent (1964) of the market in each year. The U.S. share of this market has declined gradually during this same period, and now is 23.3 percent. One product, carbon black, accounted for 65.6 percent of U.S. sales in this category.

Four dyestuff manufacturers produce some 60 different colors. All intermediate products are imported, principally from Europe. Only the more commonly used dyestuffs are produced, the more specialized fast and vat dyes being imported. Chile produces its own requirements for ultramarine, iron oxide, red lead, ochre, sienna, and umber. Some extender pigments are also produced.

Chile has a substantial paint industry comprised of some 40 plants. Twelve companies—most having licensing arrangements with U.S. and European firms—produce up to 90 percent of total production. The industry meets domestic demand for high quality pastes, enamels, varnishes, and prepared waterbase paints. Except for special paints, only small quantities of these materials are imported through the free ports, particularly Punta Arenas.

While a considerable quantity of raw materials for the paint industry is produced in Chile, somewhere near 50 percent of the industries requirements are imported. Some of these, such as synthetic resins and solvents, are included in the statistical group, Chemicals. Paint manufacturers import most of their requirements directly, although there are several importers of chemical products who also supply the domestic paint industry.

Chilean production is sufficient to meet almost all of the country's requirements for inks, particularly printing inks, but some special inks are imported, mainly from the United States.

Soaps and Candles

Chile has a well-established soap industry capable of producing the country's requirements for laundry soap, washing powders, soft soaps, soapflakes, detergents, toilet soaps, and scouring powders, and other cleansing agents. Both candles and soap are prohibited entry into all but Chile's free ports. In 1964, very limited quantities of soap, mostly soap powders, were imported, mainly into Punta Arenas.

Other Chemical and Industrial Products

This catchall category includes a variety of products, most of which are imported as raw materials for industry. While this group has declined as a percentage of overall chemical imports in recent years, it continues to be the third largest group, representing 16.4 percent of chemical and industrial products in 1964. The major reason for this decline is the substitution of domestically produced pulp for imported chemical pulp for the manufacture of paper. Such imports totaled $4.2 million in 1958 (41 percent of Other Chemicals), but only $0.3 million in 1964. However, the growth of other imports in this group—particularly cresylic acid, woodpulp for the manufacture of yarn, and essences and essential oils—have offset those losses to a large degree. Those four items, together with quebracho extract, accounted for 42.4 percent of Other Chemicals and 55.5 percent of U.S. sales in that group in 1964.

The U.S. share of this market has improved in recent years, and it represented 51.2 percent in 1964. Argentina follows with 13.2 percent (based primarily on sales of quebracho extract and inedible beef tallow and grease), and West Germany with 11.4 percent (mainly chemicals for use in the textile, plastics, and tanning industries).

The expected rapid expansion of Chile's mining industry—both large and small operating units—should greatly increase demand for chemical materials used in the concentrating of ores and for the manufacture of explosives. The expected continuing moderate expansion of the textile, rubber, plastics, and food-processing industries should generate a steadily growing demand for auxiliary chemicals, materials, and essences in those industries. Woodpulp importation should further decline once the Chilean pulp industry makes the necessary adjustments for the production of pulp suitable for the manufacture of synthetic yarn. Although Chile is almost entirely dependent upon imports for photographic chemicals, their importation will probably continue to be limited by severe import controls.

METALLURGICAL PRODUCTS

The level of Chilean imports of metallurgical products has remained relatively stable in recent years, with annual totals close to the $33-million average for the 1958-64 period. These imports have averaged a little more than 6 percent of total imports during 1960-64. However, the expected continued substantial growth in domestic steel production makes it unlikely that this category will share in the overall growth in imports. Indeed, had it not been for unusually large imports of seamless and welded pipe for an urban water program in 1964, which boosted the total to $43.2 million, the 6-percent average noted above would have felt another downward pull as it did in 1963 when metallurgical products accounted for only 4.9 percent of total imports. Import data for 1965 may not reflect this trend because of production lost from a 67-day strike that year, but the completion of the latest phase of the steel industry's expansion program will shortly be felt.

Nonetheless, the growth in demand for nonferrous metal manufactures, the continued demand for steel products not yet manufactured in Chile, the requirements of special projects, and the difficulties inherent in matching domestic steel production schedules with rapidly rising demand should guarantee that overall sales in this category will at least remain close to current absolute levels in coming years.

The United States continues to be the leading supplier of metallurgical products to the Chilean market, but its share has declined considerably from the late 1950's when it regularly exceeded 60 percent. West Germany has been steadily increasing its share, reaching 24.1 percent in 1964, compared to 37.0 percent ($16.0 million) for the United States. This growth has been concentrated in rolled steel for which in 1964 West Germany replaced the United States as the leading supplier. France moved into third place in 1964 with 6.5 percent of the market, as the United Kingdom—the traditional third supplier—slipped to fourth with 5.4 percent. Belgium, Japan, and Sweden have also been substantial suppliers of metallurgical products in recent years. Table 11 shows Chilean imports of metallurgical products, by commodity groups and principal commodities, total and from the United States in 1964.

CAP turns out more than 90 percent of all Chilean iron and steel products.

The CAP's expansion—financed in part by substantial foreign credits, including those from the Eximbank—has moved according to schedule, with the exception of the planned electrolytic tinning facility. CAP has been supported in this effort with technical assistance provided by the Koppers Company of Pittsburgh. CAP's production facilities now include two 25,000-cubic foot blast furnaces (the second began operation in early 1966), two 220-ton and two 110-ton oxygen-injection open hearth furnaces, and extensive rolling mill and other steel finishing facilities (including an improved 32-inch rolling mill). In early 1966, a new slab furnace, additional soaking pits, and a new ingot stripper were nearing completion. These improvements are designed to increase CAP's ingot capacity from 529,000 to 716,000 tons annually. By the end of 1964, ingot-to-finished-product yields was 71 percent. New expansion plans, which were revealed near the end of 1965, call for an increase in ingot production to 1.1 million tons annually by 1971. Under this plan, CAP contemplates the installation of electrolytic tinning facilities, the enlargement of laminated-steel capacity, and the creation of a continuous-flow rolling process which will eliminate the ingot stage in the production of semi-finished steel products.

Chilean iron and steel apparent consumption is estimated as follows in thousands of tons: 398 in 1962, 415 in 1963, and 463 in 1964. The consumption consisted of both shipments of domestic mills and imports, as follows, in percent:

Chilean shipments:	1962	1963	1964
By CAP	79.5%	82.5%	79.4%
By small companies	7.7%	7.7%	6.3%
Imports	12.8%	9.8%	14.3%

See Table 18, Appendix D for a detailed product breakdown of CAP shipments of iron and steel products to the domestic market in 1962-64.

In 1964, about one-third of all iron and steel consumption was accounted for by the construction industry; one-fifth by the mining industry; one-tenth

Table 11.—Imports of Metallurgical Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 54	Iron and steel, rolled	9,900	2,736
1189-001	Bars, round	345	85
-002	Bars, square	42	4
-003	Angular sections	65	13
-005	Hoops and bands	62	6
-008	Window frames	47	[1]
-009	Structural shapes	45	39
-010	Polygonal sections	303	118
-011	Alloys of ferro-nickel and ferro-chromium, bars	335	19
-012	Nickel or chromium alloy steel for manufacturing tools	53	3
1190-002	Hoops, galvanized	31	5
1191-002	Expanded sheets (*diamantada*)	138	13
1193-001	Plain sheets, thin (less than 2 millimeters thick)	633	381
-002	Plain sheets, medium (2 to 4.5 millimeters thick)	115	25
-003	Plain sheets, thick (more than 4.5 millimeters thick)	36	3
-011	Plain sheets, of ferro-nickel or ferro-chromium alloys	365	70
1194-001	Sheets, painted or galvanized	136	97
-011	Bars, cut in any form	204	156
-012	Sheets, cut in any form	80	24
-014	Pieces of steel for axles	34	32
-021	Bars, with perforating or polishing work	59	32
-022	Sheets, with perforating or polishing work	58	23
-031	Shapes, in compound sections	5,507	861
-041	Armored liners for crushing and pulverizing machines	771	472
1196-001	Corrugated sheets, galvanized	258	162
Group 55	Other metals, rolled or cast, including their alloys	659	343
1200-001	Aluminum bars	84	48
-002	Aluminum sheets	118	50
1201-001	Aluminum bars, worked	32	26
-002	Aluminum sheets, worked	99	24
1206-001	Nickel bars	28	25
-002	Nickel sheets or plates	55	55
1209-002	Zinc sheets, n.e.s.	120	45
1210-002	Zinc sheets, worked	27	27
Group 56	Metal wares for various purposes	1,261	677
1212-001	Iron wire, plain, not galvanized, for construction	31	4
-005	Iron wire, plain, not galvanized, n.e.s., for making nails or springs	110	18
1213-001	Iron wire, plain, galvanized	185	43
1214-010	Wire, n.e.s., other than iron, copper, chrome-nickel, molybdenum, nickel, copper-nickel, or lead	83	42
1217-001	White metal	31	8
1221-001	Scrap iron	234	234
1222-001	Filings, grains, and shavings of aluminum	75	70
1224-001	Filings, grains, and shavings of iron	30	4
1226-001	Solder, in iron bars and rods	63	53
1227-004	Solder of ordinary metals, n.e.s., other than of iron, bronze, tin, or lead	28	24
-011	Solder, with iron resin	107	53
-016	Solder, with resins of metals, n.e.s., other than iron, bronze, tin, lead, or silver alloy	83	49
Group 57	Wares of iron or steel (including those plated with other metals)	28,246	10,668

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 57—continued			
1229-007	Kitchen knives and cleavers of steel	37	1
-008	Ladles, strainers, spits and similar kitchen utensils of steel, n.e.s.	76	20
1230-007	Cash or sales registers, including vending machines	134	115
-009	Whetting steels for all purposes	152	2
1232-004	Wares of soft (wrought) iron, other than sanitary, table, or kitchen	45	9
1236-001	Wares, with parts of bakelite or similar materials	54	42
1241-002	Tinplate containers	54	34
-004	Tinplate ware, n.e.s., other than sanitary, table or kitchen	49	25
	Wares of iron, n.e.s., other than sanitary, table or kitchen:		
1242-003	Weighing up to 1 kilogram	434	218
-013	Weighing 1 to 10 kilograms	330	200
-023	Weighing more than 10 kilograms	280	214
1243-001	Fasteners or hooks for cases or bottles	130	92
1246-001	Baths and vats of soft or cast iron	30	[1]
1248-002	Tanks, in any form	806	619
1250-001	Wire cable or rope	1,391	342
	Chains, without rings, hooks, etc. at their extremities; also chain links and parts, when the metal has a circumference of:		
1252-001	10 to 40 millimeters	234	61
1253-001	More than 40 millimeters	337	150
	Pipe and tubing, of steel or wrought iron, with a diameter:		
	Less than 75 millimeters:		
1255-001	Welded	2,756	586
-011	Welded, galvanized	109	39
-002	Seamless	3,407	923
-012	Seamless, galvanized	125	20
	75 millimeters or more:		
-003	Welded	276	31
-004	Seamless	2,725	118
005	Accessories and fittings	3,347	1,112
-015	Accessories and fittings, galvanized	77	27
	Tubing, of sheet iron or steel, less than 1 millimeter thick, with a diameter:		
-021	Less than 50 millimeters	57	54
-022	50 millimeters or more	205	7
-023	Accessories	40	4
	Pipe and tubing, of cast iron, with a diameter:		
1256-001	Less than 75 millimeters	68	20
-002	75 millimeters or more	30	[1]
1267-002	Wire mesh or cloth	140	87
1269-001	Household heaters and cookers, burning coal or wood	108	21
-008	Household heating and cooking devices, burning coal or wood, n.e.s., other than braziers, furnaces, stoves, broilers or kitchen ranges	30	23
-011	Household heaters and cookers, burning gas	70	51
-012	Household furnaces, burning gas	81	66
1271-001	Heaters and cookers, for institutions such as hospitals and colleges	64	[1]
-003	Furnaces, for institutions such as hospitals and colleges	20	20

Table 11.—Imports of Metallurgical Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 57—continued			
1274-002	Horseshoe nails	121	[1]
1275-001	Razor blades	593	243
1278-003	Valves, for any use	2,494	1,703
-004	Spare parts for cocks, faucets, and valves	36	29
1279-001	Water meters, drinking-water	47	32
-013	Gas meters	97	24
-014	Meters for gases or liquids, n.e.s., other than oil	82	50
-015	Spare parts for meters, other than drinking-water meters	41	41
1281-001	Furniture, of all kinds	199	137
-011	Dentist chairs	44	7
1290-001	Bearings (*rodamientos*)	2,953	1,565
-002	Boxes or frames for bushings	40	11
-004	Bushings (*cojinetes*)	59	38
-005	Pillow blocks	659	474
1293-001	Screws, bolts, washers, and nuts	1,274	559
-003	Steel devices on which the above are fixed	218	58
1294-001	Tubes or cylinders for compressed gas	204	95
Group 58	Wares of other metals	3,174	1,545
1298-002	Aluminum wares, n.e.s., other than cooking ware, cans and coffins	207	113
-011	Milk cans, aluminum	102	[1]
1299-005	Wares of copper and copper alloys, n.e.s., other than locks, zippers, extinguishers, electric lamps, or lamp burners	147	30
-006	Bronze caps, for the manufacture of electric lamps	92	3
1300-005	Nickel- or chrome-plated wares, n.e.s., other than spring locks, extinguishers or electric lamps	37	16
Group 58—continued			
1302-003	Tin wares, not nickel-plated, n.e.s., other than handles	31	11
1306-021	Wares of nickel or nickel alloy, with bakelite parts	40	21
1307-001	Hinges	37	1
1314-001	Pipe and tubing of aluminum, straight	57	38
1315-001	Pipe and tubing of copper alloys, straight	83	71
-003	Fittings for pipe and tubing	24	21
-012	Copper tubing	31	14
1328-001	Aluminum foil	151	[1]
1329-001	Lamps and lanterns with fuel reservoirs	39	1
1330-002	Bronze bearings and bushings for motors	363	315
-004	Bronze water nozzles	35	30
-005	Bronze cocks, for any use	39	10
-006	Bronze spare parts for cocks, faucets, valves, and nozzles	31	12
-008	Bronze valves, for any use	1,197	623
1334-001	Sealing leads and fasteners for cases and bottles	49	43
1337-001	Bolts, screws, screw-eyes, and nuts	70	49
	All commodity groups, total	43,240	15,969
	Listed principal commodities, total	41,676	15,386
	Principal commodities as percent of total all commodity groups	96.4	96.3

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

or more by each of the agriculture, transportation, and manufacturing sectors: and the remainder by the power, fishing, urbanization, and miscellaneous sectors. Nineteen sixty-five was expected to show substantially increased consumption by the power and agricultural sectors and somewhat reduced consumption by the mining and transportation sectors with total consumption reaching about 562,000 tons.

Increased demand will depend on many factors, one of which will be the success or failure of Chile's copper expansion program which is expected not only to consume steel products but also to influence the expansion plans of many other steel-consuming investors. Maintenance, at least, of the historical trend of an average 6.6-percent annual increase in the consumption of iron and steel products seems assured.

The CAP is presently committed to a policy of giving priority to the supply of domestic not foreign needs. A decree was promulgated in 1964 (No. 1250 of November 18) requiring Chilean governmental and semi-governmental entities to purchase Chilean metallurgical products or parts in preference to imported products when "of equal price and quality." CAP's domestic pricing policy for the next 5 years is based on the formula of f.a.s.-Pittsburgh price plus 15 percent. The f.o.b.-Huachipato price for many steel products—such as reinforcing bars, flat bars, angles, wire rod, skelp, heavy plate, hot and cold rolled sheets, corrugated galvanized sheets, hot dipped tinplate, and semi-finished products—is either equal to, or less than, that for U.S. steel c.i.f. Valparaiso (Pittsburgh price plus conference freight tariff).

Despite the favorable position enjoyed by domestic production, the importation of many of these products continues either because it is difficult for the domestic industry to meet special specifications, or because imported items subsequently are incorporated into export products which the Government wishes to facilitate.

Iron and Steel, Rolled Products

This statistical group reflects most closely the substitution of domestic production for imported products. It accounted for 22.9 percent ($9.9 million) of imported metallurgical products in 1964, compared

HUACHIPATO STEEL: Wire rod loader at Cia. de Acero del Pacifico steel plant at Huachipato, Chile.

with 40 percent in the early years of the 1955-64 decade. The absolute level of such imports has declined from the $11.5 million annual average, covering the years 1957-61. Shapes in compound sections accounted for 55.6 percent of such imports in 1964, with the remainder of imports scattered among several categories. Apart from these, only armored liners for crushing machines, thin plain sheets, and bars and plain sheets of ferro-nickel or ferro-chromium alloys exceeded $0.5 million in value.

The sales pattern of the United States, which has supplied as much as 80 percent of the market in the past decade, strongly reflects the effects of substitution. By 1964 the United States accounted for only 27.6 percent of the import market ($2.7 million), while West Germany moved into first place with 37.6 percent, largely on the basis of its sales of shapes in compound sections ($2.6 million). U.S. sales are concentrated in shapes in compound sections, armored liners for crushing machines, thin plain sheets, galvanized corrugated sheets, cut bars, and polygonal sections. Japan emerged as third supplier (also mainly through sales of shapes in compound sections) with 10.6 percent, followed closely by France with 9.4 percent.

Table 17, Appendix D shows CAP shipments of round, square and flat bars; grinding bars and bars for manufacture of grinding balls; wire rod; angles and light shapes; railroad shapes; plates and coil plates; hot and cold rolled sheets; galvanized sheets; coils; black plate; and tinplate. CAP discontinued the production of structurals in 1961. Table 18 of the same appendix provides a detailed quantitative breakdown of Chilean imports of rolled products.

Other Metals, Rolled or Cast, and Their Alloys

Rolled or cast nonferrous metal imports have yet to reach a total of $1 million. The United States ordinarily supplies one-half or more of these imports, which in 1964 included aluminum and nickel bars and sheets, and zinc sheets. Small quantities of specialized copper bars and sheets are imported from time to time.

The paucity of such imports reflects the fact that Chile supplies most of its own requirements for rolled or cast nonferrous metal products, including copper and copper-alloy bars, sheets and strip; brass, bronze and aluminum sheets, bars and strip; alpakka sheets; and lead sheets. Domestic copper fabricators have for many years been guaranteed by law an assured supply of raw materials at a discount of up to 10 percent of the producer's price. This discount was limited to 0.1 percent for the first 22,000 tons to be consumed in 1966.

Metal Wares for Various Purposes

This group consists of metallic wire and cord; powdered tin and alloys; white, babbit, and type metals; scrap metals; metallic filings, grains, and shavings; solder in bars and sheets; and zinc powder.

The value of imports in this group has stabilized at between $1.2-$1.7 million annually after demonstrating moderate growth in the late 1960's. The United States has ordinarily supplied at least one-half of the market, usually followed fairly closely by West Germany. Various types of iron wire and solders and scrap iron make up the bulk of such imports.

Iron and steel, copper, brass, bronze and other nonferrous wires and cords are produced by local firms, but not always in sufficient quantity to satisfy demand. Chile also produces type and babbit metals, alloys, silver wire, galvanizing powders, tin and silver solders, and antimonial lead for batteries.

Wares of Iron and Steel

This group comprises a wide variety of metal wares, including those plated with other metals. They range from pipe and wire cable through bearings, fasteners, heating devices, household wares, and valves to gas and water meters and dentist chairs.

The value of imports in this category has remained relatively stable in recent years, at approximately $18 million. Since annual totals for the next largest group, rolled iron and steel products, have generally been declining, this group has shown a modest increase as a percentage of all metallurgical imports—58.7 percent and 56.7 percent, respectively, in 1963 and 1964. Unusually large imports of seamless and welded pipe in support of Chile's urban water system program boosted that share to 65.6 percent ($28.2 million) in 1964.

Pipe, tubing and their accessories, and fittings accounted for 46.9 percent ($13.2 million) of imports in this group in 1964. Items, each of which accounted for between 5 and 10 percent of imports in this group, included bearings and related devices; valves; screws, bolts, washers and nuts; and wire cable or rope. Other substantial imports included unspecified iron wares, tanks, chains, and razor blades.

The United States continues to be the leading supplier of iron and steel wares, with 37.8 percent ($10.7 million) of total imports in 1964, as its sales have fluctuated between about $7 and $10 million annually between 1956 and 1964. United States sales were heaviest in pipes and their fittings and accessories; bearings and similar devices; valves; screws, bolts, washers, and nuts; tanks and unspecified iron and steel wares.

The development of Chile's steel producing facilities has greatly spurred the growth of the iron and steel fabricating industry. At the present time, this industry supplies most of Chile's requirements for finished and semifinished products. The quality of products manufactured by Chilean metal plants and shops has improved considerably under the auspices of the Metallurgical Industries Association (Asociacion de Industrias Metalurgicas—ASIMET) which claims 96 percent of the metals industry as members.

The local industry produces a wide variety of iron and steel products, such as steel structures, storage tanks, metal doors and windows, plated wares, pressure cookers, drums, cans and tins for the food-processing industry, crown and bottle caps, tubes, cutlery, household hardware, cooking utensils, heating and cooking equipment (including oil burners), plumbing supplies (including valves), fittings, locks, nails, staples (for paper), tacks, spikes, pins, nuts and bolts, rivets, screws, springs, safes, and vaults. A $900,000 investment by the Atlantic Community Development Group for Latin America (ADELA) in a Chilean firm for producing seamed pipe was announced in early 1966.

Consumer items, particularly if domestically produced, are largely excluded from most of the Chilean market by import restrictions. However, there is a limited demand for some imported consumer items, such as hardware, when they are of obviously superior quality. In addition, a fairly substantial quantity of consumer items are imported through the free ports for use there. (See Chapter VI for free-port regulations.)

Wares of Other Metals

Imports of nonferrous metal wares have averaged a modest $3.7 million annually during 1961-64, after experiencing substantial growth in the late 1950's and

early 1960's. Manufacturers of bronze, particularly valves, accounted for about one-half of such imports in 1964. The United States—mainly by virtue of sales in the same category—continues to be the market's leading supplier, with 48.5 percent ($1.5 million) in the same year. The United States has seen an improvement in its share in recent years, while the share of the second supplier, West Germany, has declined from 38.2 percent in 1961 to 18.6 percent in 1964.

Chile is a producer of lead pipe, copper pipes and tubes, aluminum foil, aluminum pipes and tubes, and many nonferrous hardware items.

MACHINERY, ACCESSORIES, AND TOOLS

Machinery, accessories, and tools lead all other Chilean imports and have done so during the past decade. They make up a category of imports that has grown more steadily than any other category. Their value amounted to 26.0 percent of total value of imports in 1964, compared with 15.7 percent in 1955. Imports of such products averaged $141 million annually during 1961-64, while the 1964 total of $158 million was almost $100 million higher than that for 1955. General industrial machinery represents the largest and fastest growing group in this category. Imports of electrical and motive machinery have been substantial, but their growth has not been as steady as that of general industrial machinery. Imports of mining and agricultural machinery continue to represent a small portion of machinery imports, and the growth, particularly of the latter, has lagged. Because of the age of much machinery in use in Chile, a large portion of imports consists of replacements and spare parts. Table 12 shows Chilean imports of machinery, accessories and tools, by commodity groups and principal commodities, total and from the United States in 1964.

Table 12.—Imports of Machinery, Accessories, and Tools, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 59	Mining machinery, implements, accessories and tools	6,439	3,965
1342-001	Special safety lamps	25	19
1343-001	Excavators	313	298
-003	Drilling machinery	521	177
-004	Mining machinery, n.e.s.	2,619	1,157
1344-003	Apparatus, n.e.s., other than iron buckets for carrying metals	456	317
1345-001	Components and spare parts	2,497	1,991
Group 60	Agricultural machinery, implements, accessories and tools	4,999	2,886
1346-001	Ploughs	402	90
1347-001	Fertilizer spreaders	57	39
-002	Harrows	411	227
-003	Mowers	105	67
-004	Sowers	207	176
-006	Agricultural machinery, n.e.s., other than threshers, corn pickers, milkers, levelers and graders, and lister-type fertilizer-planters	1,271	777
-007	Harvesters, n.e.s., other than corn pickers	1,269	535
1348-001	Apparatus, n.e.s.	75	36
1351-001	Components and spare parts	1.122	926
Group 61	Machinery, accessories and tools, n.e.s., for industries and trades..	99,801	45,335
1352-001	Oilers and lubricators for machines	98	75
1354-001	Pumps, for industry or trade	2,742	1,386
-002	Fire-fighting pumps	48	6
-003	Pumps for dispensing fuels	55	7
1355-001	Apparatus for conveying materials or products, n.e.s.	70	7
-011	Machines for conveying materials or products, n.e.s.	3.235	684
	Made-up packings, disks, or rings for clutches, pistons or valves; brake-bands and interior parts, n.e.s., for cocks, faucets, and valves:		

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 61—continued			
1356-001	Of cork	44	30
-011	Containing 30% or more of rubber	334	248
-021	Of metal, including those with rubber or other materials	931	717
-031	N.e.s., other than those of leather or asbestos, rubber rings for protecting boring tubes, and weather stripping	848	491
1357-001	Cranes, derricks, winches, and other lifting machines	4,840	2,747
-002	Passenger elevators	612	8
-011	Pulleys, block, and tackle	130	69
-012	Jacks	100	25
-013	Lifting apparatus, n.e.s., other than pneumatic carriers	211	139
1358-001	Sewing machines	432	132
-002	Refrigerating machinery, other than domestic	1,318	327
	Machinery for the following industries, n.e.s.:		
-003	Printing or lithography	812	367
-004	Glass-making	214	101
-006	Footwear	65	4
-011	Food-preserving	365	158
-013	Copper-fabricating	59	20
-014	Dairy	688	37
-015	China and porcelain	53	6
-018	Nitrate	56	47
-019	Steel	33	33
-021	Textile	3,111	620
-023	Washing machines	237	83
-024	Lathes	1,247	244
-027	Hydraulic presses for plastics	162	[1]
-030	Milling machines	149	35
-032	Shaping and slotting machines	34	[1]
-033	Sewing machines, for household or popular use	2,293	22
-040	Planning machines	110	2
-041	Machines for packing, wrapping, and applying cellophane	81	14

Table 12.—Imports of Machinery, Accessories, and Tools, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 61—continued			
-044	Automatic looms	128	[1]
-045	Electric drilling machines	79	15
-046	Turret or capstan lathes	190	83
-047	Machinery for plastics industry, n.e.s.	164	4
-048	Non-calculating statistical machines using punched cards	753	266
-049	Eccentric presses, more than 100 metric tons	113	17
-050	Centrifuge machines of all types	188	22
-052	Road rollers, without means of propulsion	64	[1]
-054	Air compressors	2,824	2,233
-057	Fans	64	21
-059	Paper cutting and trimming machines, automatic and semiautomatic	39	[1]
-064	Machinery for filling, closing, sealing, capsuling, or labeling	126	[1]
-067	Excavators	45	11
-025	Machinery, not specified [2]	30,503	10,164
1359-003	Crucibles	35	2
-009	Apparatus for the textile industry	97	5
-019	Manometric air filtering and regulating equipment	20	19
-013	Apparatus, not specified [3]	9,173	4,643
1360-001	Protective safety helmets	84	76
-004	Protective safety gloves	45	40
-005	Protective safety masks	89	78
-006	Protective clothing and apparatus, n.e.s., other than aprons and rubber wrappings for electrical workers	87	69
-007	Spare parts for protective clothing and apparatus	84	77
1361-001	Components and spare parts for machinery	19,112	13,512
-002	Parts for road construction machinery	78	68
-005	Continuous woven felt belts for industrial machinery and apparatus	30	[1]
1362-001	Whetstones	32	18
-002	Stones, of emery or carborundum	325	89
1367-001	Replacement appliances, of wood	97	45
-002	Replacement appliances, of metal	4,665	2,878
-003	Blades for handsaws	71	7
-004	Saws of all kinds, for machines	336	69
-006	Matrices and molds for the plastics industry	59	5
-007	Drills and bits for wood and metal	382	290
-008 to -019	Replacement applicances, n.e.s., other than molds for phonograph records	1,106	697
1371-002	Drilling machines	54	13
-003	Wimbles	95	51
1376-001	Pliers	47	8
-004	Wrenches	262	122
-006	Flatirons for clothing	30	7
-007	Handsaws and saws	35	5
-009	Tool sets and parts	1,159	474
-011	Files and rasps	94	9
-012	Guns and similar apparatus for painting or spraying	32	6
Group 62	Motive machinery, boilers and spares	20,309	10,477
	Steam or pressure water-heating boilers:		
1383-001	Weighing up to 3,000 kilograms	374	177
-002	Weighing more than 3,000 kilograms	1,278	533
-003	Radiators and water heaters	33	32
1387-001	Nonleather transmission belts and bands	516	207
1388-001	Conveyor belts and bands, leather	134	2
-002	Conveyor belts and bands, rubber	780	241
-011	Conveyor belts and bands, with teeth	100	28
	Motors and engines, including those for vehicles:		
1390-001	Diesel	283	75
-003	Internal combustion	2,138	1,400
-005	For fishing boats	1,930	1,370
1393-001	Electric, up to 5 horsepower	323	151
-002	Electric, over 5 horsepower	1,189	431
1395-001	Turbines, not for dental use	2,891	83
1396-001	Components and spares for boilers, motors and turbines	8,260	5,712
Group 63	Electric machinery, apparatus and material	26,154	11,680
1397-001	Insulators, for electric current	397	246
1398-001	Copper wire, covered with insulating material other than silk	72	51
1399-001	Copper cables	1,825	786
-003	Cables, not of copper	521	56
1400-001	Screw-type light bulbs	61	27
-002	Bulbs for lighting, n.e.s., other than fluorescent or mercury vapor	605	200
1401-001	Audio and rectifying valves, for any purpose	1,016	649
1402-001	Telephone plant apparatus, wireless or not	4,991	1,228
1404-002	Electric bells	25	21
1405-001	Flexible tubes for non-built-in electric installations	77	44
-011	Rigid tubes for built-in electric installations	117	69
1406-001	Carbons and electrodes	475	230
-002	Graphite electrodes	146	35
1407-001	Prepared tapes of insulating material	98	57
1408-001	Dynamos and generators	886	592
-002	Alternators	71	2
-003	Converters	114	90
-005	Generators, up to 300 kilovolts	134	64
-006	Generators, 300 to 1,000 kilovolts	102	63
-007	Generators, 1,000 to 10,000 kilovolts	52	40
-011	Diesel generator sets, up to 300 kilovolts	32	3
-014	Generating machinery, n.e.s., other than generator sets	386	108
1409-001	Noncovered connections, for electric current	188	144
-011	Covered connections and male plugs	602	314
1410-001	Condensers	431	132
-002	Rectifiers	126	80
-003	Rheostats	179	119
-004	Resistors and coils	581	251
-005	Transformers, up to 200 kilowatts	1,338	777
-006	Transformers, more than 200 kilowatts	694	236
-008	Filaments and wire, including tungsten spirals	34	1
-011	Complete distribution and control boards for electric power houses and stations	1,330	574
-021	Circuit-breaking apparatus, for household use, not included under Number 1413	301	109

Table 12.—Imports of Machinery, Accessories, and Tools, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued

Tariff number	Description	Imports Total	Imports United States
Group 63—continued			
1410-023	Thermostat controls for refrigerators	40	12
031	Circuit-breaking apparatus, n.e.s.	2,487	1,536
036	Oil circuit breakers	590	378
-007	Electrical apparatus, n.e.s.	1,359	666
1411-001	Spare parts for machines in Group 63	936	498
1412-002	Searchlights and reflectors	53	12
-011	Metal lamps with glass refractors	80	33
1413-003	Apparatus and wares for household lighting networks, n.e.s., other than switches and simple fixtures	47	28
1414-001	Electricity meters	1,043	534
-002	Spare parts for electricity meters	35	17
1415-001	Electric batteries, 1.5 volts	420	173
-002	Storage batteries, of less than 100 kilograms net	166	73
-003	Storage batteries, of more than 100 kilograms net	277	34
-004	Parts for storage batteries, n.e.s.	137	93
-005	Dry cells, other than 1.5 volts	84	20
1417-001	Fuse-plugs, fuse-cartridges and fuses, for electric current	135	73
	All commodity groups, total	157,702	74,343
	Listed principal commodities, total	156,387	73,958
	Principal commodities as percent of total all commodity groups	99.2	99.5

[1] Equals zero or less than $1,000.

[2] Category does not include: machinery, n.e.s., for the sugar, cement, tire, paint, nitrate, and metallurgical industries; bench and column drills; three or four-sided planning, spindle-moulding and joining machines; sharpeners for sawblades and machine tools; sharpeners with a more than 20-horsepower multiplier; automatic centrifuge separators; electric hand tools; three-phase bench sanding machines; hydraulic, endless band and chain saws; welding and cutting oxygen blowtorches; mechanical forge hammers; machines for printing with ink platens, for classifying fruits and for cutting skins and hides; spinning frames for yarns and threads; automatic machinery for manufacturing, washing and sealing bulbs; shaping rolling mills; universal rectifying machines for machine tools; and lacers and crampers for working leather.

[3] Category does not include: apparatus for carpenter's bench, for sewing, for freezing, for printing and lithographing, for laundering, for drying hair; apparatus, n.e.s., for the bed-manufacturing and sugar industries; bench vises; mechanical or hydraulic presses for counterplating; eccentric presses of more than 100 metric tons; cutters for sheets of more than 6 millimeters' thickness; faucets and valves, vapor traps, etc.; ice plants; magnesium crucibles with gold or steel bases; plate shears; electrical equipment for treatment of ferrous metals; and compression meters.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*. Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

The United States is the leading supplier of machinery, accessories, and tools to the Chilean market, with sales of $74.3 million in 1964. The U.S. performance was strongest in motive, agricultural, and mining machinery, as has generally been the case in recent years. The average U.S. share of machinery sales during 1961-64, about 48 percent of total imports, is below the previous four-year average of 55 percent. In 1964, West Germany was second with 16.2 percent and the United Kingdom third with 8.3 percent—not very different from their performance in the late 1950's. Other European and Japanese manufacturers are now offering keen competition in the Chilean market. In some cases, credit terms of over 10 years have been extended by these suppliers. France has been prominent among them, claiming fourth place with an average of slightly under 5 percent of the market since 1962.

Continued substantial growth for machinery sales seems likely. The magnitude of such growth to a great extent depends upon Chile moving forward with large-scale investments in copper mining. The development of new industries, such as the petrochemical industry; the expansion of existing ones, such as pulp and paper; the growth in demand for consumer goods which cannot be imported, such as textiles; and Government policies giving priority to agriculture should contribute to increased imports of items in this category.

The magnitude of machinery imports will, to a great extent, depend upon the availability of external financing on liberal terms. Importers of machinery have felt the limiting effect of the Chilean Government's policy that urges them to seek financing for their imports with unusually long repayment terms—often in excess of 8 years. However, Chile is receiving, and should continue to receive, large-scale foreign financing, a large portion of which may be used to finance the importation of machinery, accessories, and tools. Further success of the Government's economic stabilization program and the confidence which would be engendered by successful implementation of the copper investment agreements should produce a substantial inflow of private capital into Chile for productive projects now under consideration or in advanced stages of planning.

United States machinery should continue to receive a boost from the substantial U.S. economic assistance program in Chile (discussed in Chapter I) by far the greatest part of which goes for the financing of imports essential to the Chilean development program. In June 1965, the Central Bank authorized the exemption from certain surcharges and prior deposits of imports of capital and other high-priority goods financed under the U.S. program loan. The selection is made on a case-by-case basis. The program loans for 1964-66 have also included provisions that a portion of those loans be reserved for purchases by the public sector. In early 1966, AID concluded a special $10-million project loan for the purchase of capital equipment on extended credit terms. The Chilean Government announced that the loan would be used primarily for the purchase of mining equipment for the medium and small mining industry.

Mining Machinery, Implements, Accessories, and Tools

Chile is almost wholly dependent upon imports of equipment for its vital mining industry. Imports classified as mining machinery, implements, accessories, and tools, however, have not accounted for a particularly large portion of machinery imports in recent

years. They have never accounted for more than 5 percent of overall machinery and equipment imports in the 1955-64 decade and more often have been closer to the 4.1 percent ($6.4 million) in 1964. But this is deceptive, since a very large volume of equipment for the mining industry is included under other classifications, such as transport machinery where it is usually not identifiable as mining equipment. Components and spare parts accounted for 38.8 percent of imports in this group in 1964.

Local manufacturing does account for some production, such as certain types of hammer mills, custom-made power-driven overhead cranes, rock crushers, Decauville mine cars, concrete vibrators, flotation cells, and castings. But production is largely limited to the more simple type of equipment.

The U.S. share of this market (61.5 percent—$4.0 million in 1964) has fluctuated in response to the timing of mining projects and the source of their financing, accounting for as high as 91.8 percent (1956) and as low as 52.5 percent (1962) in the 1955-64 decade. France and West Germany have made the next best showing in recent years, alternating in second place, with 14.3 and 13.8 percent of such imports, respectively, in 1964.

Most imports by the Anaconda, Kennecott, and Cerro copper companies, the Bethlehem-Chile Iron Mines, and the Anglo-Lautaro Nitrate Company are made in New York, N. Y., through the centralized purchasing offices of these companies. The medium and small mining companies usually purchase their requirements through distributors in Chile.

In the next section of this report an attempt is made to indicate planned activities in the various sectors of the Chilean mining industry. It has been convenient to describe entire mining projects, rather than just those parts of them which might be expected to generate sales of products, in the statistical group, Mining Machinery, Implements. Accessories and Tools.

Copper. Law 16.425 of January 25. 1966 is designed to provide the legal basis for a major expansion of the copper mining industry and for an increase in domestic refining and fabricating facilities. The law provides for the participation of the Chilean Government in mixed mining corporations and gives the Government a decisive voice in copper sales policy. (See Chapter II for a discussion of these arrangements.) Most of the machinery and equipment required for these operations will be purchased through the central purchasing offices of these companies in the United States. Since these companies follow a policy of purchasing as much of their needs as possible from Chilean suppliers, the investments should also stimulate demand for components and materials to be incorporated in domestic products.

Anaconda Copper Company. Projects with an estimated cost of $145 million are designed to increase annual production of copper by 209,000 tons. About $10 million has already been expended. Of the remaining $135 million, it is estimated that about one-half will go for the purchase of equipment and materials in the United States and the remainder for purchase of goods and services in Chile. Most of the increased production is to be obtained from a new ore body—the Exotica—adjacent to its Chuquicamata pit operation. The latter and the company's El Salvador mine will supply the balance of the increase.

Anaconda will also participate jointly with the Chilean Government in the formation of an exploration company to seek and evaluate new ore bodies both on Anaconda claims and on state-administered land. Refining capacity is to be increased from 193,000 to 523,000 tons annually. Anaconda has further agreed to study the formation of a new national manufacturing industry with which it may associate for the purpose of exporting fabricated copper products. There will also be an expansion of housing and school facilities for workers. The domestic construction industry will supply almost all requirements for those facilities.

Acquisitions for Chuquicamata will include power shovels and other earthmoving equipment; hauling equipment, primarily trucks, during the initial 2- to 3-year stripping operation and two large conveyor belt systems; tools; drills; railway equipment, including locomotives, cars, and trucks; equipment for concentrating, smelting, and refining facilities; pipelines for additional water supplies; and enlargement of power-production and transmission installations. The latter involves conversion from use of petroleum to domestically produced coal as a stimulus to Chile's depressed coal-producing industry. Mining extraction, smelting, and refining operations are expected to feature increased automation.

Expansion plans for Anaconda's El Salvador mine will require the purchase of some new equipment for the mine, concentrator plant, and the smelter at Potrerillos. The current enlargement of the electrolytic refining facility at Potrerillos will require an expansion in the generating capacity of the company's Barquitos powerplant.

Kennecott Copper Corporation. The mixed corporation with 51-percent Chilean participation which is to operate the El Teniente mine is expected to increase annual production by 99.000 tons. Refinery capacity is to be increased from 303.000 to 771.000 tons annually. The Government's participation involves a payment of $80 million to Kennecott and a loan of $20 million, both of which are to be reinvested in increasing productive capacity. An additional $100 million is to be sought from other sources, including the Eximbank. Eximbank financing would assure the importation of a large volume of equipment from the United States.

The expansion of the El Teniente mine—already the largest underground copper mine in the world

with proven reserves of about 2.2 billion tons of copper ore—will require both the construction of new facilities and the enlargement of existing ones. These projects include: the driving of an additional tunnel (below an existing one) for transport of ore fed from above to a mill at the site; construction of rail facilities and acquisition of rolling stock for use within the mine; construction of a new mill; enlargement of the concentrator plant and the sulfuric acid plant which supplies it; construction of pipelines to move the concentrate to the Caltones smelter several miles away; construction of power transmission lines between Kennecott's Coya powerplant and El Teniente; construction of new dams at Pangal and Los Patos and enlargement of an old one at Sapos; and addition of power-generating facilities at Pangal. The company will also construct a 27-mile, hard-surfaced highway leading from El Teniente through Caltones to Rancagua; revamp communications facilities; and construct various maintenance and storage buildings.

Cerro Corporation. Investments of $81 million in the development of the Rio Blanco mine, northeast of Santiago, are expected to result in the production of 72,000 tons of copper annually in the form of concentrates. By 1965, $10 million had already been spent in preliminary work, and Cerro was seeking external financing of $45 million. Eximbank financing of this venture would result in nearly all imported equipment being of U.S. origin.

The project involves sinking a 2,000-foot shaft, at the bottom of which the primary crusher is located, to connect with a four-mile tunnel. After block caving, the ore will move by conveyor belt to the crusher and then on to the underground concentrator plant at the end of the tunnel. The tunnel will also contain an electric railway. A pipeline will carry the concentrate more than 40 miles to a filter plant to be built near Los Andes. Another pipeline will dispose of tailings nearby. Besides equipment for building these installations, earthmovers, trucks, tools, and conveyances for personnel will also need to be imported. The Chilean Government, as part of its proposed 25-percent equity participation, will supply the electric-power needs of the project through expansion of facilities. The state railway will transport an increasing portion of the concentrates each year to the Government smelter and electrolytic refinery at Las Ventanas, while the remainder will be exported. Cerro has agreed to sell about 2.5 million tons of concentrate to three Japanese firms in return for $20 million in credits over 5 years.

Medium and small copper mines. Encouraged by the strong demand for copper at the beginning of 1966, the Chilean Government announced a five-year plan to increase output of the medium- and small-sized copper mines from 110,000 to 242,000 tons annually. The program envisages reform of the Mining Code to reactivate dormant mining properties and the provision of economic and technical assistance to the small miner. The extension of guarantees on foreign exchange, taxation, and other benefits conferred by the new copper law (No. 16,425 of January 25, 1966) is also expected to spur production.

In September 1964, ENAMI inaugurated a $20-million copper smelter to process ores from the medium and small mines of Tarapaca, Antofagasta, Coquimbo, Aconcagua, Valparaiso, Santiago, O'Higgins, Aysen, and Magallanes provinces.

The Las Ventanas smelter is expected to process over 165,000 tons of ore and concentrate annually, with potential for expansion to 495,000 tons. The $25-million-plus electrolytic refinery portion of the complex, designed for an output of 93,000 tons annually, should be completed in 1966. ENAMI'S Paipote smelter will continue serving mines in Atacama Province. CORFO was expected to report in mid-1966 on a proposed copper smelter in the Antofagasta area for which private capital participation might be welcome.

Compania Minera Disputada de las Condes, S.A., a subsidiary of Societe Miniere et Metallurgique de Penarroya, is engaged in a major expansion program which had nearly doubled monthly ore production to 143,000 tons by December 1964.

Empresa Minera de Mantos Blancos, S.A., owned by the Mauricio Hochschild interests, is Chile's fourth largest producer and is now operating at near capacity levels and could not increase output without a refinery expansion program.

Compania Minera Carolina Michilla, owned by Compania Minera y Comercial Sali Hochschild, S.A., was to begin work at the end of 1965 on a $3.5 million concentrator plant on Michilla Bay to serve a new property with estimated reserves of 2.2 million tons of copper ore (2.5 to 3 percent copper). The project includes a leaching plant, a sulfuric acid plant, and a five-stage, flash-evaporator desalination installation. Hochschild planned to begin work in 1965 on a $1.3 million modernization and enlargement of its Copiapo plant—including mechanization of the receiving area, a new crushing plant, and an additional leaching plant.

The Compania Minera Chanaral y Taltal, with the assistance of CORFO, in late 1965 began preparation of a leaching plant on their San Pedro de Cachiyuyo property. The foreign exchange cost of the project has been estimated at 1.82 million escudos (November 1965) plus $275,000. The plant capacity will be 220,000 tons of ore daily, producing the equivalent of 1,500 tons of copper annually.

A joint study by the Sociedad Minera Cutter Cove and ENAMI in 1965 has resulted in work preliminary to exploitation of an ore body in the Cutter Cove area at the extreme western tip of the Brunswick Peninsula in Magallanes Province. This deposit, abandoned

STEEL PLANT: Blooming Steel Mill of Cia. de Acero del Pacifico, Talcahuano, Chile.

in 1912, has reserves of 440,000 tons (3 to 4 percent copper) which may prove to be as high as 1.7 million tons. A 220 ton-per-day concentrator, signifying an investment of $1 million, was under consideration for upgrading the ore to 25 percent.

Iron Ore. Total production in 1965 was 14,018,500 tons of which more than 85 percent represented the output of CAP, Bethlehem-Chile Iron Mines, and the Santa Fe Mining Company. The 1961-70 development plan called for a 6.6-million-ton increase in production. While production increases have not occurred as rapidly as envisaged in the plan, several factors suggest that the industry will continue to maintain a strong growth pattern. Among these are greatly expanded shipments to Japan, Europe and LAFTA, expansion of Chilean steel-producing facilities. and continued investments in the enlargement and upgrading of large Chilean iron mines. Small operations are not likely to expand their activities greatly unless there is a substantial improvement in the price for ore.

Developments which could stimulate the expansion of ore-producing facilities include:

1. Santa Fe Mining, controlled by Minerals and Chemicals–Phillips Corporation—Chile's largest iron ore producer—has plans for investing $30 million over a 10-year period, mostly for improving present equipment for the upgrading of ore from existing facilities.

2. A fluid iron ore reduction process being tried out by the Standard Oil Company (New Jersey) at a pilot plant in Halifax, Canada, is being observed with interest in Chile by both ore exporters and CAP since Chilean ore averages about 2 percent less than the commercially desirable 65-percent ore.

3. While neither CAP nor Bethlehem have plans for further expansion after completion of recent improvement projects, an increase is technically feasible, should demand warrant an expansion.

4. Geological surveys undertaken in 1964 by CAP of its Algarrobo mine and adjacent sectors indicate reserves substantially larger than once thought—perhaps as much as 66 million tons. They were expected to justify major production increases in 1965—perhaps by 32 percent.

5. The Compania Minera Santa Barbara hopes to join the ranks of major producers with an annual output of 2.2 million tons by the end of 1966. The company has been exploring the possibility of acquiring additional mining properties.

6. Exploratory operations suggest possible further evelopments of iron mining in these areas:

(a) Preliminary estimate by CORFO of a 77-million-ton, high-grade ore body at Boqueron-Chanar, north of Vallenor. Its location, deep within alluvial sediments, would require large investments, resulting in Chile's first major subsurface iron mine.

(b) CAP investigation of magnetic anomalies appearing in the Anuanuca and Alcaparra areas.

(c) Santa Fe continued its detailed study of the El Laco deposit, potentially one of the largest in Chile.

Other Minerals. *Nitrate.* Although the Chilean itrate mining industry faces severe competition in the orld market from synthetic nitrates, production has een growing at a moderate rate and should continue grow, because of rising domestic consumption and he aggressive research and sales effort of the Anglo-autaro Nitrate Company in support of the Chilean itrate Sales Corporation (COVENSA). Anglo-autaro, which produces more than 85 percent of hilean nitrate, has been making annual investments of etween $1-$2 million to increase operating efficiency nd to diversify production. Pilot-plant production of dium sulfate and boric acid is underway.

Molybdenum. While Chilean molybdenum produc-on is expected to rise sharply as a by-product of xpanded copper mining operations, the Chilean overnment is supporting studies related to the de-lopment of mines whose primary product would be olybdenum. Pilot experiments are now underway to etermine the feasibility of domestic production of erro-molybdenum.

Sulfur. The Chilean sulfur industry sees bright rospects ahead. Plans for installation of a triple uperphosphate fertilizer plant and expansion of the opper, steel, paper, oil refining, and agricultural in-lustries should boost demand. While a good portion f the requirements will probably be met by an in-rease in sulfur extraction from smelter fumes and he roasting of pyritic materials, the actual mining of ulfur should also be stimulated. Chile was already xperiencing a severe shortage of sulfur and sulfuric cid in 1965, and it was estimated that 41,000 tons f sulfur would have to be imported in that year.

Sociedad Azufrera Ancanquilcha, in conjunction vith the Mantos Blancos Mining Company, has been tudying means of increasing sulfur output by about 3,000 tons annually, through modernization and en-argement of existing facilities for treating sulfur caliche. A recent mineral survey indicates a large ulfur deposit near Arica.

Sodium Chloride. Production of salt totaled 120,-000 tons in 1964, twice that for 1963, and production is expected to increase further. Wells (Chile) Contratistas Mineros has joined with Compania de Punta de Lobos to form Compania Sal-Chile to carry out a major expansion of production from the Salar Grande deposits south of Iquique. The absence of overburden and the salt's average purity of 99.8 percent make open pit methods possible. After blasting, the material would be moved by front-end loaders directly into truck-trailer combinations, and transported to a nearby port for crushing and screening. The company's plans called for production of 336,000 tons annually, beginning in 1965, for domestic consumption and for export to Brazil and Japan.

Mercury. Chile's sole producer of mercury (14 tons in 1965) has encountered a severe shortage of exploitable ore. With the assistance of CORFO it is carrying out explorations, particularly in areas indicated as promising by a United Nations Special Fund team.

Apatite. Chile's only producer of apatite, although experiencing financial difficulties in 1964, is studying plans to increase output through new processing techniques.

Perlite. The Perlita Compania, Ltda., a Chilean mining group with claims in the Laguna de Maula, has been investigating the mining of this volcanic glass that is used for insulation and plaster aggregate. The exact extent of these large reserves is not known.

Agricultural Machinery, Implements, and Tools [11]

The value of imports in this group has declined steadily from a total of $8.3 million (6.3 percent of overall machinery and equipment imports) to $5.0 million (3.2 percent) in 1964. Imports during those years were at about the same levels as those in the mid-1950's. However, the Chilean Government has attached a high priority to agricultural development. This emphasis on increased agricultural production should provide encouragement to agricultural equipment sales. Sales to farmers are largely financed by the Chilean State Bank (Banco del Estado de Chile) through credits to importers of machinery and by CORFO on credits ranging from 3 to 5 years. A factor limiting imports, however, has been the requirement, deemed necessary because of foreign debt renegotiations, that importers of agricultural equipment seek credit terms in excess of 5½ years.

Another problem for farm implement dealers is that they must maintain a very large inventory of spare

[11] This group does not include tractors and farm earthmoving equipment, which are discussed under the next section, Transport Machinery, Materials and Accessories.

parts in stock to anticipate future demand. This results from delays produced by import control procedures. Air freight orders have been known to take several months for final delivery. The Government attempted to alleviate this situation in September 1965 by eliminating prior import registration and deposit requirements for spare parts valued under $500 when imported by end-users themselves. Imports of components and spare parts represented 22.4 percent ($2.5 million) of agricultural machinery imports in 1964.

United States sales have reflected the overall decline in agricultural machinery sales. But despite considerable annual fluctuations, the United States has managed regularly to supply about 50 percent of the market during 1961-64 (57.7 percent—$2.9 million in 1964) after slipping from as much as three-fourths of the market in the mid-1950's. The United Kingdom has gradually improved its position, supplying 33.8 percent ($1.0 million) in 1964. West Germany has ordinarily supplied between 10 and 15 percent of the market, but its sales were negligible in 1964. Belgium and Canada also supply small quantities of agricultural machinery and equipment.

Chile is wholly dependent on foreign sources of supply for cultivators and weeders, most harrows and rollers, seeding and fertilizing machinery, agricultural sprayers and dusters, combines, pick-up balers, all other haying machinery, irrigation distribution equipment, dairy farm equipment and machinery, poultry farm equipment and machinery, and farm-type elevators and blowers.

Chile does produce certain types of small harrows, plows, farm wagons, and trucks (nonmotor powered), agricultural sprayers and irrigation equipment, seeders, corn shellers, potato graders, fertilizer spreaders, and grain dryers. Many of these are copies of imported models. Nonprecision spare parts are also produced. The Government has authorized a Chilean firm, Mauricio Hochschilds, S.A.I.C., to manufacture discs for plows, harrows, and seeders under license and technical supervision of a British firm. Planned production of the completed items will eventually be sufficient to supply the entire domestic market plus some exports to neighboring countries.

Machinery, Accessories, and Tools for Industries and Trades

This group, the largest in the category "Machinery, Accessories, and Tools," comprises a very wide variety of items, including machine tools and general machinery and equipment for Chile's leading industries—textiles, foodstuffs, steel, chemicals, and rubber—and other manufacturing industries. It is also one of the fastest growing and represented 63.3 percent ($99.8 million) of machinery imports in 1964; such imports averaged 56 percent during the 1959-61 period. During Chile's industrial expansion of t early and mid-1950's, this group represented an ev larger percentage of overall imports. Liberal impo duty exemption provided by Chile's Foreign Inve ment Law and similar legislation affecting domest industries have in the past done much to encoura new investments and the importation of a large volu of machinery and equipment. Table 17, Appendix shows indices of Chilean industrial production a provides some indication of the growth in dema for industrial equipment.

The largest identifiable items in this group 1964 were cranes, derricks, and other lifting machine metal replacement appliances (attachments) for m chinery; pumps; conveyor machines; textile machi ery; air compressors; domestic sewing machine commercial refrigeration equipment; lathes and to sets. Components and spare parts constituted 19 percent of all imports in this group in 1964. Unspe fied machinery and unspecified apparatus togeth accounted for another 39.8 percent.[12]

While the total value of U.S. sales has grown su stantially, the United States has seen a steady d cline in its share of the market from 1959 (55 percent—$29.8 million) to 1964 (45.0 percent—$45 million). West Germany, whose sales had grown nearly a quarter of the market in 1961, supplied 16 percent in 1964. The United Kingdom, with 5.3 pe cent in 1964, has regularly occupied the third positio Several other countries have enjoyed a substanti growth in sales. Thus, both Denmark and Cana were a hair's breadth behind the United Kingdom 1964, each with sales totaling more than $5 millio French, Swiss Brazilian, Italian, Argentine, Norwe ian, and Swedish sales amounted to between $1. $3.0 million each.

Chile is almost entirely dependent on foreign sourc for the supply of machine tools, accessories, meta working equipment, and other industrial equipme The domestic machinery manufacturing industry h grown out of iron and steel foundry operations. Son foundries and metalworking plants are modern a efficient, and many of the leading industrial firr have well-equipped machine shops with up-to-da American and European machine tools. Many, ho ever, have obsolescent equipment and often have dif culty in meeting quality standards. The former a capable of producing fairly complicated machine too often copies of foreign models, on a custom basi Some of the largest and most efficient, which produ for their own needs, are those run by the large minir companies, the steel mill, the Chilean Military Arse als, the Chilean State Railroads and the Chilean Na Dockyards at Talcahuano.

[12] To make these two statistical classifications more meaningf footnotes to these items (1358-025 and 1359-013) in text table indicate, so far as possible, what items are excluded.

But for the most part, production is limited to small quantities of light machinery, equipment, and parts of simple design such as drills, presses, bench and column drill presses; small engine-lathes; shaping machines; milling machines; grinding mill machines, horizontal boring mills; hand forming rolls; polishing stands; pedestal grinders; small drop hammers and crank presses; simple centrifugal, rotary and piston-type pumps; small ovens and welding equipment; simple centrifugal, rotary and piston-type pumps; industrial ventilators, commercial air-conditioning and refrigeration equipment; trailers; stackers; small hoists; bakery, meat cutting, canning, fruit drying, dairy, soda fountain and beer dispensing equipment; stainless steel appliances; steel foundry parts, and various types of handtools. Some of these items are not produced on a continuous basis.

CORFO has investigated the prospects for local production of domestic sewing machines, machine tools, and forged tools (pickaxes, hoes, axes, wrenches, pliers, hammers, files, rasps, spades, and tweezers). It is calculated that their production would result in foreign exchange savings for Chile of $1.0, $1.3, and $0.35 million annually. The Singer Company has begun production of sewing machines that use imported Brazilian motors.

Chile now supplies about 25 percent of its own machine tool needs, and a CORFO study calls for meeting Chilean needs for certain basic machine tools by 1970 through annual production of 97 bench lathes, 181 universal lathes, 139 bench drill presses, 59 pedestal drill presses, 38 reciprocal-type saws, and 16 endless blade saws. Total investment for such a factory is estimated at $399,000, plus the equivalent of $616,000 in Chilean currency. The United States now supplies about 20 percent of such imports and might lose sales of about $200,000 annually to domestic production. Argentine sales would be the hardest hit. The limited market and high prospective cost of such production (2 to 3 times higher than current world prices) has presented serious obstacles to these plans.

Motive Machinery, Boilers, and Spare Parts

Except for domestically produced small electric motors ranging from ⅓ to 20 horsepower, some steam-generating and pressure water-heating boilers, and limited quantities of transmission and conveyor belting, Chile is largely dependent upon imports to satisfy requirements for goods in the group, motive machinery, boilers, and spare parts. As is the case with other machinery imports, components and spare parts account for a large porportion of these imports, 40.7 percent ($8.3 million) in 1964.

Imports in this group have averaged 12.5 percent of overall machinery imports during 1961-64 and totaled $20.3 million (12.9 percent) in 1964. This group, in earlier years, represented only a slightly higher percentage of overall machinery imports.

The U.S. share of this market averaged 58.5 percent during 1961-63, but dropped to 51.5 percent ($10.5 million) in 1964. Its share during the first 6 years of the 1955-64 decade ranged between 55.6 and 67.0 percent. The U.S. sales were heaviest for internal combustion engines, engines for fishing boats, and components and spares ($5.7 million—54.5 percent of U.S. sales) in 1964. West Germany sales averaged 15.4 percent of the market during 1961-63, but dropped to 12.9 percent in 1964. British sales, however, jumped to 21.5 percent of the market in 1964, after averaging 9.9 percent during 1961-63.

Electrical Machinery, Apparatus, and Material

Although Chile has made important strides in recent years in the manufacture of electrical machinery and equipment, and is practically self-supporting in some types of electrical equipment and supplies, neither heavy electrical machinery nor specialized equipment is produced. Thus, the expansion of Chilean power-producing and telecommunications facilities has led to greatly increased imports of items in this group. This growth accelerated during the late 1950's, and grew to an average 21.0 percent of overall machinery and equipment imports during 1959-62. Sales represented 18.9 and 16.6 percent of overall machinery and equipment imports in 1963 and 1964, respectively. However, the absolute value of such sales totaled $29.0 in 1963 and $26.2 million in 1964. Individual items for which sales were heaviest in 1964 included telephone plant equipment,[13] circuit breaking equipment, transformers, copper cables, power generating machinery, powerplant distribution and control boards, electron tubes (valves), and electricity meters.

The U.S. share of the electrical equipment market has fluctuated between 38.4 (1961) and 61.4 (1958) percent during the 1955-64 decade. The U.S. sales averaged $11.4 million annually during 1961-64. Sales totaled $12.5 and $11.7 million—50.5 and 44.7 percent of the market—in 1963 and 1964, respectively. The largest U.S. sales in 1964 coincided with the major items listed above plus spare parts. The United States supplied at least one-half the market for all of those items except copper cable and power distribution and control boards. West Germany has ordinarily supplied between 16 and 21 percent of the market in recent years (19.4 percent in 1964), with sales scattered through a wide variety of products, but sales were heaviest in telephone plant equipment ($1.4 million) in 1964. France and the United Kingdom have alternated in the third position in recent years, with

[13] Telephone receivers and transmitters are listed under Group 79, Articles and Instruments for Science.

each ordinarily supplying between 7 and 13 percent of the market. French sales in 1964 ($2.7 million) were composed largely of telephone plant equipment ($1.8 million).

Chilean production of electrical equipment now includes electrodes; transformers; voltage regulators; switch gear; circuit breakers; copper wires and cables; lighting equipment, including incandescent and flourescent lamps, lighting fixtures, ballast and starters, metal reflectors and fittings, attachment plugs and caps, outlets, lamp sockets and receptacles, conduits and fittings, insulators and insulating material, and outlet switches; storage batteries, including those for automobiles; and a few of the most commonly used electron tubes.[14]

The production of electron tubes has been encouraged by the conclusion of a Complementarity Agreement, on February 18, 1964, for trade of this product between Argentina, Brazil, Chile, Mexico, and Uraguay under the terms of the treaty which established LAFTA. Chile has shown interest in making other electrical products the subject of such agreements.

Chilean production of electrical energy nearly doubled between 1950 and 1964. Installed generating capacity totalled 1,490,000 kw. in 1964. Most future growth is expected to take place in the public service sector. Public power is expected to total 1,247,000 kw. of installed capacity by 1967 and 1,600,000 kw. or more by 1972, depending upon the development of plans now under consideration by ENDESA. Most of this power will be tied into a system connected by 154-kilovolt and 110-kilovolt primary transmission lines extending from Copiapo to the Island of Chiloe. Table 20, Appendix D shows the growth in Chilean consumption of electric power by category of consumer between 1950 and 1964. See the section, "Power" in Chapter II: Basic Data, for a description.

The IBRD has been a primary source for the financing of Chilean power development. Through 1964, it had loaned $61 million which had been used to install 589,000 kw. of new generating capacity. The Rapel 350,000-kw. project, to which the bank contributed financing, will probably be completed in 1970. In February 1965, the bank announced a $4.4 million loan, a good part of which has not yet been disbursed, to finance an interim power program for construction of small power-generating facilities in Antofagasta and Punta Arenas and a submarine cable to the Island of Chiloe, for improvement of its transmission and distribution system, and for improving its planning function.

Future projects may include those to serve the growing Concepcion industrial area: (1) the 100,000 kw. Bocamina thermoelectric plant to be completed in 1969 with construction beginning in 1966 at a cost of $22 million plus 33 million escudos and (2) the 400,000-kw. El Toro hydroelectric installation to be completed in 1971 for which some preliminary work has begun.

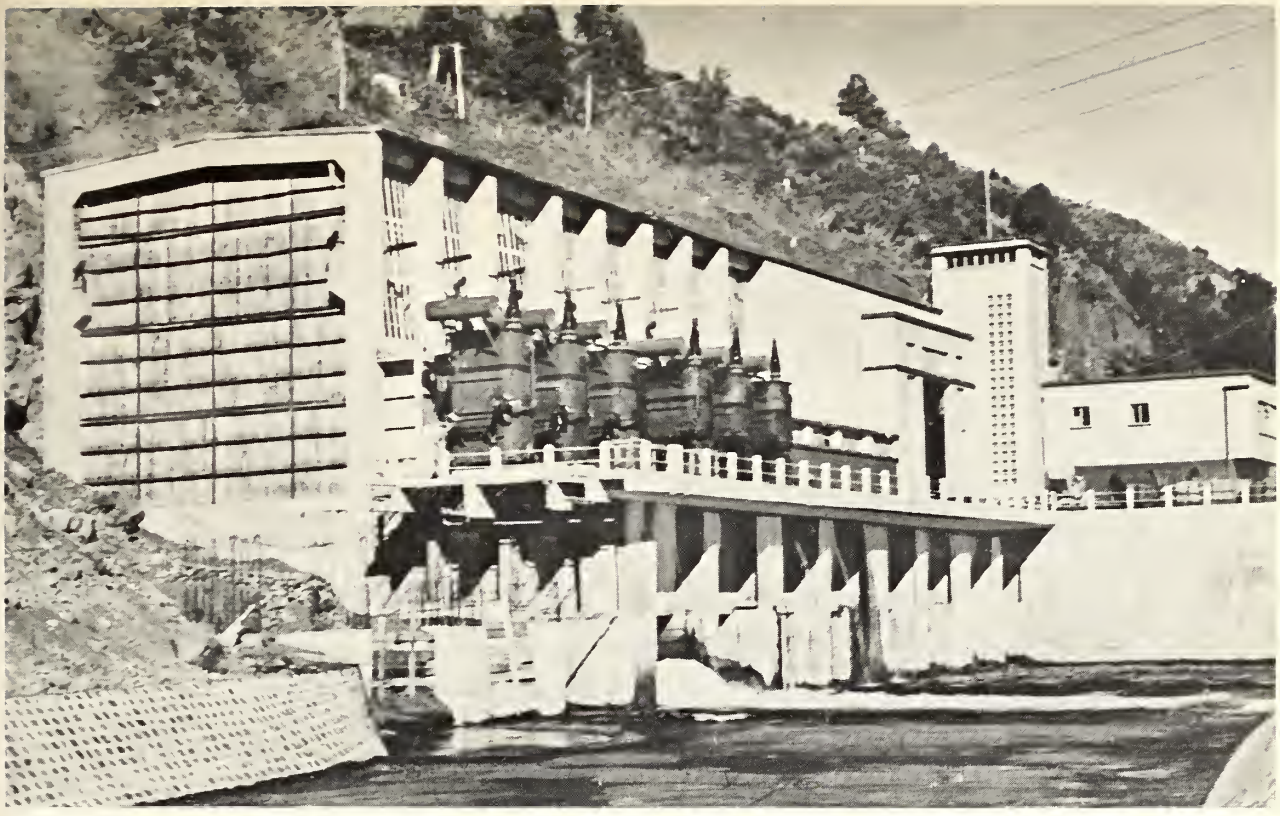
Rural electrification is being emphasized, for only 8,017 out of 169,136 farms received electric service as of 1964. The first stage of the program calls for increased distribution of power to areas closest to existing transmission lines and to those with highest population density. In support of this program, AID authorized a $3.3-million loan in early 1965 to finance electrification projects by 14 cooperatives throughout the country. It aims at adding 1,475 miles of distribution lines to 2,252 miles now in service, at improving existing power and light facilities, and at providing service to 5,491 previously unserved members in addition to the 3,489 members now served.[15]

It is hoped that the project will increase agricultural productivity by making possible the application of power driven machinery to such farm tasks as pumping water for homesteads and irrigation, furnishing economical refrigeration, and providing power for small machinery, lighting, and communications. Rural electrification should also encourage the development of poultry- and grain-processing plants, small canning plants, and handicraft. Increased activity of this type should boost the demand both for electrical equipment imports and for domestically produced equipment. The immediate direct impact upon demand for imports is relatively small, since Chile manufactures concrete poles, copper conductors, and transformers. However, Chile still must import steel cores and paper insulation for transformers in addition to suspension insulators, oil circuit reclosers and sectionalizers, meters, hot-line working tools, oil-testers and filters, and steel guy wires.

The Chilean Government in February 1965 announced a new program for the development and integration of the nation's public and private communication facilities. The program calls for: (1) creation of a Government telecommunications enterprise (Empresa Nacional de Telecommunicaciones—ENTEL) which will own and operate the basic channels of communication, principally the long-distance backbone microwave network; (2) construction of this microwave network which would eventually connect all provincial capitals and principal cities by telegraph, telex, radio, television, and telephone channels which the enterprise would lease to private users; (3) an increase to 49 percent of Chilean equity participation in CHILTELCO, a subsidiary of International Telephone and Telegraph Company (ITT); and (4) a 5-year, $125-million CHILTELCO expansion program aimed at raising the number of phones per 100 inhabitants from 2.8 to 4.4. The ITT will also seek to expand

[14] Other audio-electronic equipment is listed under Group 79, Articles and Instruments for Science.

[15] Members are not usually single users, since a large farm may include 10 to 50 workers' homes; or small service villages every few miles apart may include 30 to 50 homes with 3 or 4 small stores, a municipal water system, and 50 street lights, all of which are served as a single member.



CHILE POWER: Hydroelectric power continues to be produced in this powerhouse, the Abanico hydroelectric plant, of Empresa Nacional de Electricidad.

domestic production of CHILTELCO's material requirements through ITT's Standard Electric subsidiary to the point where 88 percent of these may be procured locally. The provisions involving CHILTELCO are embodied in an agreement between the company and the Government. The agreement awaits ratification by the Chilean Congress.

A contract to construct telex exchanges of the crossbar type in Vina del Mar, Rancagua, San Fernando, Curico, Talca, Linares, Cauquences, Chillan, Concepcion, Los Angeles, Angol, and Arica was awarded to a Swedish firm in October 1965. This first stage of a Department of Post Offices and Telegraph project is to be completed in 1968. A second stage, beginning in 1968, will extend telex facilities to 12 more cities—in addition to those already in Santiago, Antafagasta, Valparaiso, and Punta Arenas—by 1970. The AID is considering a loan to finance a feasibility study which would deal with all aspects of an integrated telecommunications system, including the Communications Satellite Agreement, of which Chile is a Signatory.

TRANSPORT MACHINERY, MATERIALS, AND ACCESSORIES

The value of imports in this category has probably fluctuated more sharply from year to year than any other major import category. In the 1955-64 decade, it has totaled as low as $42 million (1959—10.2 percent of all imports), and as high as $115 million (1961—19.5 percent of all imports). The level of imports has been more stable in recent years, averaging a little more than $76 million annually during 1962-64. The level of such imports has depended to a very great extent upon availability of external financing and the Government import policy. Automotive equipment (including tractors and earthmovers) and railway equipment have accounted for the bulk of such imports, but there has been a modest increase in sales of maritime and aviation equipment. Table 13 shows Chilean imports of transport machinery, materials and accessories, by commodity groups and principal commodities, total and from the United States in 1964.

The United States is the leading supplier of transportation equipment, with 36.7 percent ($27.1 million) of the market in 1964. However, its position has eroded since 1959 when it supplied 63 percent of the market. Greatly expanded competition from European and Japanese suppliers in automobile and railway equipment sales, the increased importance of maritime equipment sales for which the United States has not been a leading competitor in recent years, and European sales of aviation equipment are responsible for this decline. France, which trailed the United States with 22 percent of the market in 1964, held the

Table 13.—Imports of Transport Machinery, Materials and Accessories, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 64	Railway and tramway equipment and material	15,716	4,043
1419-001	Fixed seats for automobiles	26	15
1421-002	Self-propelled rail-cars, less than 10,000 kilograms	20	20
1422-001	Bogies	673	138
1423-001	Track switches	162	157
-002	Crossings	45	44
-003	Derailers	20	20
-004	Frogs	24	24
1424-001	Cars with cabs	60	60
-004	Freight cars	296	117
1425-001	Freight cars for temporary or portable railways	221	40
-004	Track-inspection and repair cars	55	55
1427-001	Passenger cars	122	122
1428-001	Fishplates or binding plates	304	169
-003	Material for railway permanent way, n.e.s., other than sole plates	109	105
1429-001	Semaphores and signaling material, n.e.s.	445	46
1430-001	Locomotives, steam	116	116
-002	Locomotives, electric	5,455	478
-011	Locomotives, combustion	477	443
-012	Locomotives, internal combustion	68	[1]
1431-001	Infrastructure components for cars and locomotives	835	531
1432-001	Rails	4,816	524
1433-001	Axles, more than 50 kilograms net	188	37
-003	Wheels, more than 50 kilograms net	218	44
1434-001	Axles, up to 50 kilograms net	31	31
-002	Tires, up to 50 kilograms net	85	83
-003	Wheels, up to 50 kilograms net	52	49
1439-001	Components and spare parts, n.e.s., for machines and apparatus	730	558
Group 65	Watercraft and navigation material	7,408	679
1440-001	Anchors and grapnels of iron	92	13
1441-001	Compression apparatus for divers	82	81
-005	Watertight suits for divers	39	12
1445-002	Shackles	91	38
1448-001	Floating docks	84	[1]
1450-001	Watercraft, of steel, non-seagoing	222	[1]
-002	Watercraft, of wood, non-seagoing	37	37
1452-001	Watercraft, fitted for fishing or preservation of fishery products	1,225	191
1453-001 to -021	Watercraft, other than for sport, n.e.s.	4,454	[1]
1456-002	Beacons	321	[1]
-003	Signaling apparatus, n.e.s., other than light buoys for air, sea, or land routes	320	37
-004	Accessories and spare parts for signaling apparatus	107	107
1458-001	Propellers	159	81
1460-001	Life buoys	35	29

[Thousands of dollars]

Tariff number	Description	Imports Total	Imports United States
Group 66	Vehicles, n.e.s., and their components and spares	51,013	22,329
1462-001	Airplanes	13,868	3,889
-002	Helicopters	75	75
-008	Parts, not specified, for aircraft	1,232	728
1463-007 to -208	Automobiles	6,314	1,984
1463-314 to -501	Station wagons	398	145
1463-997 to -998	Jeeps and agricultural jeeps	1,009	365
1465-043 to -193	Buses	279	139
1466-000 to -300	Trucks	6,524	4,268
1467-000 to -201	Pick-up trucks (camionetas)	2,020	1,517
1467-314 to -501	Panel trucks (furgones)	671	234
1468-003 to -201	Ambulances	122	101
1469-024 to -196	Firefighting vehicles	343	238
1473-001	Automobile bodies and their parts	206	110
1476-001	Cars without mechanical motors	416	182
1480-000 to -169	Automobile chassis	3,237	1,594
1480-301 to -421	Tractors	4,618	1,586
1482-001	Axles, with or without bushings or nuts	149	51
1483-001 to -003	Headlights and spotlights, and their components and spare parts	182	131
1487-001	Automotive tire casings	2,805	933
-002	Automotive inner tubes	192	87
-005	Airplane tire casings and inner tubes	96	51
-007	Tractor tires and casings	260	134
-010	Recapped tire casings	33	32
1489-011	Bicycles	50	3
-013	Parts and spare parts for bicycles	101	[1]
1490-001	Automobile springs, other than shock absorbers	137	92
1491-001	Tire patching materials	90	26
-011	Brake fluid for automobiles	253	197
1492-001	Spare parts for vehicles (excludes spares for motors and those exclusively for agricultural tractors)	5,087	3,343
	All commodity groups, total	74,137	27,051
	Listed principal commodities, total	73,688	26,888
	Principal commodities as percent of total all commodity groups	99.4	99.4

[1] Equals zero or less than $1,000.

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.

Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

second position on the basis of its sale of three jets to the Chilean National Airlines. France had already dislodged West Germany from the second position in 1963. Locomotive sales put Italy in third-place, with 9.6 percent of the market. The United Kingdom was fourth, with 8.7 percent, as the result of growing tractor sales.

A top-level Government Advisory Commission for Transport (Comision Asesora de Transportes—CAT) was established in 1965 to: (1) Coordinate and integrate Chilean air, sea, rail, and road transport; (2) plan new investments in the transportation sector; (3) formulate a national transport policy; and (4) plan a new transportation ministry. The Economic Institute of the University of Chile and the State of California through its Chile-California program are providing consultative support to the CAT.

Railway and Tramway Equipment and Materials

Imports in this group were greatest at the outset of the Ten Year Railway Modernization Plan during 1961-63, reaching $30.8 million (36.2 percent of transport imports) in 1962. Such imports totaled only $15.7 million (21.2 percent of transport imports) in 1964 as the equipment procurement program began to lag. Electric locomotives and rails accounted for 65.4 percent of all such imports in 1964.

Italy, by virtue of its sales of electric locomotives, was the leading supplier of railway equipment in 1964, with 36.7 percent ($5.8 million) of the market. Japan was second—thanks to rail sales—with 28.1 percent. The United States trailed with 25.7 percent, its sales scattered through several categories. Between 1957 and 1962, U.S. sales accounted for about 50 percent to 83 percent of the market, totaling as much as $16 million in 1962, but dropped to 29.5 percent in 1963. Credit competition has been very sharp in this field.

The Chilean State Railway (Ferrocarriles del Estado), which operates more than 80 percent of Chile's 5,163 miles of track, is launching a Five Year Program (1966-70) which essentially regroups projects left undone under the 1961-70 plan. The principal items in the new program include:

Track modernization. The new plan calls for completion of the continuous-rail replacement program over the Santiago-Puerto Montt route and improvement of routes north of Santiago.

Electrification. Total investment for railway electrification projects is estimated at $15.6 million, to be allocated according to the following schedule; in millions of dollars: 1966, 1.7; 1967, 0.6; 1968, 3.6; 1969, 5.0; and 1970, 4.7.

Credit terms are: 5 percent against purchase order, 5 percent against shipping documents, and 90 percent in 16 semiannual payments at 7 percent.

The electrification projects include:

(1) *Valparaiso—Santiago Zone:* The modernization of substations and contact lines through the replacement of 12 transformers in 6 substations by silicon rectifier converters (2,000/3,000 kw. 3kv. dc), the replacement of catenary contact lines, and the purchase of 7 powerline service cars;

(2) *Chillan-Concepcion and Chillan-Temuco Lines:* The installation of 9 substations (18 transformers) and contact lines, and the purchase of 40 locomotives (seventeen 3,600-h.p. and twenty-three 2,400-h.p.), 19 yard locomotives, and 8 contact-line service cars;

(3) *Santiago—San Antonio line:* The installation of 3 substations and the procurement of 5 locomotives and 3 yard locomotives:

(4) The acquisition of two portable electric substations (2,000 kw., 3 kw. dc.) to supplement the new installations;

(5) *Santiago—Chillan line:* The purchase of 26 yard locomotives and 8 self-propelled passenger rail cars for a line now being electrified.

Acquisition of diesel-electric locomotives and spare parts. Procurement costs, totaling $21.4 million, for the purchase of:

1966	10	1.676 meter-gage locomotives
	21	1.000 meter-gage locomotives
1969	48	1.676 meter-gage locomotives
	6	1.000 meter-gage locomotives

The program also calls for the purchase of three locomotives (two of the rack or cog variety) for the Arica-La Paz railroad.

Modernization of signalling system. A separate 10-year program, for which details are not yet available, calls for modernization of the signaling and telecommunications system at a cost of $6 million.

Acquisition of rolling stock and spare parts. The plan estimates purchases of 7,500 freight and 800 passenger cars, all of which are expected to be produced domestically.

Because of an increasing accident rate to which antiquated freight equipment had contributed, the State Railways announced, in 1965, plans to increase replacements of freight cars as well as wheel and axle sets. Three hundred and fifty freight cars were to be replaced in 1965, compared with 120 in 1964. Six thousand axle and wheel sets were to be replaced in 1966, and 3,500 sets in 1965, compared with 1,200 in 1964.

Rolling stock operated by the public railways at the beginning of 1965 included 911 locomotives (560 steam, 228 diesel, and 123 electric), 42 self-propelled rail passenger cars (20 electric, 3 diesel electric, and 19 diesel), 130 motorized rail vehicles, 10,092 freight cars and cabooses, and 966 passenger and baggage cars.

The Chilean State Railways use equipment standards established in other countries (largely the United States, but also Italy and Germany) as the occasion warrants. The railways' testing office has established some general standards pertaining to equipment manufacture. An office is maintained at 80 Pine Street, New York, N.Y.

Several private companies, such as the large mining companies, operate private railways. Some of these maintain central purchasing offices in the United States.

Watercraft and Navigation Material

While there has been a modest increase in recent years in sales of watercraft and navigational material, the level of sales has not reflected earlier plans for the purchase of some $91 million in cargo vessels over the 1961-70 period. With few exceptions, sales have been concentrated in fishing vessels and equipment for the northern fishmeal industries. The unavailability of financing for purchases of cargo vessels has limited their acquisition.

Importation of items in this group averaged $6.8 million annually in 1961-64 and accounted for between 4 percent (1962) and 10 percent (1964) of overall transport equipment imports. United States sales were limited to $1.2 million in 1963 and $0.7 million in 1964. Total marine equipment sales were $6.5 million and $7.4 million in those years. France, West Germany, and Denmark were the most significant suppliers through 1964, and were joined by Japan and Yugoslavia in 1965.

During the past decade, there has been little growth in the Chilean merchant fleet. In 1965, the fleet was composed of 18 companies which operated 62 vessels of over 100 deadweight-tons with an average age of 17 years. Fifteen of these vessels belong to the state-owned and subsidized Empresa Maritima del Estado (EMPREMAR). The most recently purchased vessels were four new 11,620 deadweight-ton frieghters by the Compania Sud Americana de Vapores (CSAV). One vessel was delivered in 1965, and the others are scheduled for 1966.

Ship construction in Chile is limited to tugs, fishing boats, and similar small craft. Shipyards are not equipped to handle liners, large cargo vessels, or coastal steamers. The exception is the Chilean Navy Dockyard in Valparaiso (Astilleros y Maestranzas de la Armada—ASMAR) which can build craft up to 200 deadweight tons and handle repairs for vessels up to 30,000 deadweight tons. ASMAR, which also does private or commercial work, will soon be able to take on larger and more complete construction jobs.

Chile is largely dependent upon foreign sources of materials and equipment for supply of its shipbuilding and repair industry. This includes machine tools, engines, auxiliary equipment, navigation and communications equipment, and considerable quantities of finished steel. However, a growing amount of finished steel is obtained from domestic production.

Vehicles, Not Elsewhere Specified, and Their Components and Spares

This category, the largest of the statistical groups for transportation equipment, includes primarily aviation and automotive equipment and their components and spare parts. Tractors are also included in this group, but not their spare parts which are covered under agricultural machinery. Total imports in this group, after reaching an $84.7 million peak in 1961 at the beginning of the 10-year development plan and earthquake reconstruction, fell off to a $49.2-million annual average for the 1962-64 period. The group has constituted as much as 86.6 percent of equipment imports and accounted for 68.9 percent of such imports in 1964.

The U.S. share of this market was 43.9 percent ($22.3 million) in 1964, but it was as high as 65.9 percent in 1959. In 1964, France, because of jet sales, and the United Kingdom, because of tractor sales, had gained the most ground. In this group, in 1964, French sales represented 27.1 percent, the United Kingdom, 11.1 percent, and West Germany, 7.0 percent.

Aviation Equipment. There are no aircraft manufacturers in Chile. The market for commercial and military aircraft (including jets), spare parts, motors, propellers, and instruments has been limited by the shortage of foreign exchange and the inavailability of foreign credits. The United States enjoys an advantage in equipment sales because of a previous large purchase of equipment by the National Airline (Linea Aerea Nacional—LAN) and the Chilean Air Force. However, its jet fleet will consist of three French Caravelles (purchased in 1964) until Chile is able to purchase a limited number of longer-range U.S. jets. LAN has also been carrying out a limited replacement program for some of its older prop planes. Private planes are imported directly by clients, many of whom are members of flying clubs, whereas spare parts and instruments are retailed by dealers.

Automotive Equipment and Tractors. The Chilean automotive industry, except for some assembly of trucks and tractors in Santiago, consists of some 18 assemblers of automobiles and light trucks located a thousand miles north of Santiago in the free port of Arica. Except for cars (valued at an estimated $2 million in 1964) imported for use in some of the isolated free port areas and those brought in by Chileans who have resided abroad or by members of foreign missions in Chile, completely assembled automobiles have been prohibited entry into Chile since January 1962. However, assembled engines, transmissions, and knockdown body parts are imported into Arica because of certain customs exemptions and tax benefits provided to encourage the automotive assembly industry there.

Each year Chile has been requiring that a progressively increasing percentage of automotive components for locally assembled vehicles must be of domestic origin. These percentages were set at 27, 32, and 45 percent for the years 1964-66. However, the requirement was reduced to 30 percent for 1966. The contribution which a particular domestic part makes to this required percentage is the percentage that it represents of the vehicle's total cost in the country of primary manufacture. Chilean parts, which are available for incorporation in the finished product, include sheet metal items, bumpers, hubcaps, glass, seats, upholstery, brake linings, batteries, tires, and brake fluid. In 1965, there were reports that the Prestolite International Company planned to manufacture spark plugs, coils, condensers, contact sets, and regulators

in Chile. CORFO has also been trying to encourage the production of elliptical and semielliptical springs in Chile on an economic scale, but with no success to date. Because of difficulties in building up sufficient inventories of domestic parts, gaining foreign exchange authorizations for imports, and other problems, automobile production in Chile must often be concentrated toward the end of a particular calendar year.

Automotive tires and inner tubes represent one of the larger import categories in this group, amounting to $3 million in 1964. INSA is the sole producer of tires and inner tubes in Chile, and its annual tire production passed the one-half million mark for the first time in 1965. The General Tire and Rubber Company has a minority interest in the company. INSA does not produce airplane, industrial, or motorcycle tires nor does it produce all types of tractor and automobile tires used in Chile. An investment application by the Firestone Tire and Rubber Company has been approved by the Chilean Government, and INSA has also announced expansion plans.

In pursuit of integration objectives under LAFTA, Chile has sought to work out complementation arrangements with other LAFTA automotive producers, particularly Argentina and Brazil. One concrete result has been an agreement that parts produced by these countries will count as domestic parts in computing requirements for use of national production. However, at this time, imports and exports of such components between two particular countries must equal each other.

In February 1966, the Chilean Government announced the introduction of a bill in the Chilean legislature which, if passed, would lead to a complete reorganization of the industry. The draft bill calls for: (1) Elimination of special tax and customs privileges for producers in Arica within 180 days of the law's promulgation; (2) establishment of an automotive committee headed by the executive vice-president of CORFO to establish a financing and manufacturing program of at least 4 years duration and the setting of domestic component requirements (at least 30 percent); (3) submission by producers and prospective producers of plans which will be judged for conformity to the program objectives, particularly within the areas of minimum production levels, interchange within LAFTA, scheduling of investments, and Chilean capital participation of at least 25 percent; (4) the automotive committee's approved transfer of facilities to other parts of the country and its approval for certain tax and customs concessions; and (5) establishment of a 400-percent duty on the c.i.f. value of foreign vehicles and a 150-percent duty on imported parts; procedures are to be set for waiver of such charges under special circumstances.

Chilean assembly of automotive vehicles, according to Chilean Government statistics, during the years 1962-64, were as follows:

	1962	1963	1964
Passenger cars	5,359	6,643	6,030
Buses	0	0	0
Trucks	1,256	1,537	1,528

United States companies operating in Chile in recent years include American Motors, Ford, General Motors, and Chrysler. Trade sources report no significant increase in assembly in 1965.

Ford, in late 1965, moved to Arica and began production of pick-up trucks in conjunction with a Chilean company and later will turn out Falcons. The Kaiser and Fiat companies have also shown interest. The leading foreign models produced are BMC, Citroen, Datsun, Fiat, and Simca. Volkswagen has vague plans for producing in Chile. Altogether, nearly 30 different models are produced from time to time.

Table 13 does not give a complete picture of vehicles imported for assembly because it does not distinguish between knockdown vehicles and those assembled personal vehicles which enter under special privileges. Also, depending upon their degree of completeness, unassembled automotive imports appear to be classified under both automobiles and automobile chassis. Data on imports into Arica provide a better picture of unassembled automotive imports although they also include some assembled personal vehicles. Thus, most of the 3,679 automobiles ($3.93 million), 127 station wagons ($0.13 million), 50 jeeps ($0.87 million), 552 pickup trucks ($0.84 million), 268 panel trucks ($0.22 million), and 1,364 automobile chassis ($1.38 million) imported into Arica in 1964 were probably unassembled. Slightly over 800 of these units were of U.S. make. Domestic production and imports do not go very far in meeting the Chilean need for automobiles. Total needs of all types of automotive vehicles have been estimated to be in the neighborhood of 35,000 annually.

Chilean registrations of motor vehicles for the year ending December 31, 1964, totaled 88,744 passenger cars (including station wagons and jeeps), 11,458 buses (including both chassis and complete buses), and 84,658 trucks. Because of heavy import restrictions and limited production, the proportion of older vehicles is very high; as a result, spare parts and maintenance equipment represent a substantial portion of imports.

Chile has a shortage of vehicles, particularly buses and trucks. Many medium- and large-size trucks enter under special customs regimes created to encourage specific domestic industries and are not as much affected by general import prohibitions. No appreciable number of buses was imported between 1961 and 1965. In that year, a crisis in urban transportation generated estimated immediate needs for 1,900 buses and a backlog of demand for about 4,000 buses and 3,000 trucks. There are estimates that, without restrictions made necessary by foreign exchange shortages, Chile could absorb 8,500 imported buses and

trucks annually. In 1965, Chile, under the AID programs, authorized the emergency importation from the United States of some 600 bus chassis valued at about $4 million. The importation of an additional 1,000 chassis depends to a great extent on Chilean plans for expanding body fabrication facilities. In mid-1965, after a 4-year general ban on truck chassis to the permitted list on a limited basis, and authorized their financing under an AID program which provides incentives for their supply from the United States.

Chile is wholly dependent upon foreign sources of supply for wheel, garden, and crawler tractors as well as earthmoving equipment. In the medium-duty field, United States equipment has met increasing competition from English, Canadian, and West German suppliers because of price disadvantages, but it continues to hold its own in the heavy-duty field because of the U.S. reputation for quality. Imports of tractors, $4.6 million in 1964, should grow because of the priority given by the Chilean Government to agriculture and because of planned mining and construction projects.

MISCELLANEOUS MANUFACTURED PRODUCTS

This category of imports comprises widely diversified groups of manufactured products not included elsewhere in the Chilean tariff. Scientific articles and instruments (including office machines and certain electronics) and miscellaneous manufactures (largely commercial gear and military equipment), together, are the two groups which have regularly constituted one-half of imports in this category. Imports of ceramics, printed matter, paper products, prepared stones and earths, and rubber and plastic manufactures have also been significant. Changes in the level of imports in this category have followed rather closely the changes which have occurred in the overall level of Chilean imports. Thus, during the 1955-64 decade, this category has varied between only 7.0 percent (1958) and 8.5 percent (1963) of total Chilean imports. More often than not, the percentage of miscellaneous manufactured imports has been very near that for 1964, (7.4 percent—$44.9 million).

Except for a dip in sales in 1962-63, the United States has ordinarily supplied between 35 and 38 percent of the import market, with 37.4 percent ($16.8 million) in 1964. United States sales were concentrated that year in refractory bricks; books; scientific articles and instruments (in good part, office machines); and a variety of rubber, paper, and military products. West Germany, primarily on the basis of its sales of scientific articles and instruments, had for some time held second place but has slipped somewhat in recent years, supplying 15.4 percent of the market in 1964. The United Kingdom, Italy, and Japan have alternated in the third position recently, each capturing between 6 and 10 percent of the market. Argentina, in 1964, for the first time appeared among the top four suppliers on the basis of book and office machine sales. Table 14 shows imports of miscellaneous manufactured products, by commodity groups and principal commodities, total and from the United States, in 1964.

Stones, Earths, Ceramics

Prepared Stones and Earths. Chile's requirements for prepared stones and earths are met largely from domestic production. Imports, which have reached $3 million (1963) in recent years, consist primarily of asbestos. Limited quantities of cement materials are imported through free ports and special cements are imported elsewhere. Some vitreous enameling compositions are imported. Through its sales of asbestos, Canada has been the leading supplier while the United States has furnished most of the cement.

Ceramics, Glassware, and Manufactured Stones and Earths. Imports of ceramics, glassware, and manufactured stones and earths ($6.4 million in 1964) consist almost entirely of refractory bricks to supplement Chilean production. Large quantities of refractory bricks are used in steel and copper smelting. The United States has enjoyed an increasingly large share of the market (57.2 percent in 1964). Germany has ordinarily supplied 20 to 25 percent of the market for ceramics and glassware through sales of a variety of products.

Chilean industry produces most glass products except laboratory ware, optical glass, and watch crystals. Local factories now supply all requirements of the beverage, pharmaceutical, toiletry, household, kitchenware, and foodstuffs industries. Window and plate glass for the building trade are also produced, as is an increasing amount of glass for use in automobiles. Manufacturing techniques vary from the highly mechanized production of flat glass and containers to semiautomatic and manual production of household and other glass products. The high cost of glass containers substantially increases the sale price of the end product, with the result that heavy plastic bags are often used in their place.

Sanitary fixtures; tableware; utility pottery, pipes or tubes made of earthenware, stoneware, cement or asbestos; and other ceramic, stone, and earthenware products used in Chile are produced mainly by the local industry.

Small amounts of glass and consumer products enter through the free ports.

Table 14.—Imports of Miscellaneous Manufactured Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 67	Prepared stones and earths	2,813	952
1494-001	Vitreous compositions for fire enameling or coloring glass	229	144
1495-001	Asbestos boards or sheets	174	57
1497-001	Asbestos, fibrous state	1,340	167
1498-001	Asbestos, worked into any shape, for the manufacture of engine packings	222	87
1499-001	Portland cement, or other calcined silicates of lime and alumina other than white cement	269	28
-003	Thermolith	54	46
-004	Klinkers for white cement	46	[1]
1500-001	Eternit	55	41
-005	Cements, n.e.s.	375	369
Group 68	Ceramics, glassware and manufactured stones and earth	6,438	3,684
1515-021	Glass wool, conglomerated	76	25
1517-012	Earthenware, painted or decorated	123	11
1523-001	Fine porcelain, gilt	30	3
1533-021	Piping, channeling, etc., n.e.s., of asbestos and magnesia, mixed, for thermic insulation	102	49
1543-011	Bottles, flasks, and other glass receptacles, weighing 10 to 50 grams	86	3
1548-006	Lavatories	31	10
1556-001	Figures, statues, vases and other ornamental articles	64	7
1562-001	Refractory brick	4,922	3,303
1574-001	Sandpaper, not including emery paper	82	29
1582-001	Glass tubing and pipe, for any purpose	82	16
-004	Glass tubes, neutral, calibrated	47	[1]
1585-001	Glass for spectacles	31	14
1586-001	Glass pieces, unworked, for lenses	51	44
1587-001	Common flat glass, more than 4 millimeters thick	60	2
1594-001	Glass wares, unetched, with a density below 2.6, n.e.s.	134	49
Group 69	Manufactures of wood	228	94
1604-004	Pine lumber, planed or dovetailed, for construction	59	59
1606-001	Laths, planed, for partitions	32	2
1608-006	Plywood	28	24
1609-001 to -003	Sheets or bars of wood-fiber pulp	82	5
Group 70	Cabinet-maker's wares and other wares of wood or compressed sawdust	337	175
1615-002	Tanks or receptacles, of all kinds, other than barrels or casks	43	43
1633-001	Furniture	184	98
Group 71	Manufactured cork and cork wares	20	5
Group 72	Manufactures of rubber, plastic and similar material	2,653	989
1643-002	Automatic pencils and pens, of of bakelite	59	57
-003	Manufactures of bakelite, n.e.s., other than buttons	115	19
-022	Manufactures of compositions similar to bakelite and celluloid	475	145
-041	Razors of bakelite or similar material, for shaving	37	3
1644-010 to -021	Miscellaneous rubber articles (primarily for personal use)	48	24
1645-001	Tubes or hose-piping, their connections and branchings	1,385	570
1646-001	Sheets and strips of rubber and similar resins	134	58
1650-001	Elastic thread, not exceeding 15 grams per 10 meters	29	188
1652-001	Footwear, rubber, n.e.s.	47	9
Group 73	Tannery products, furs, and their derivatives	835	738
	Footwear with leather uppers or soles:		
1660-001	Top boots, with legs 25 to 45 centimeters high	19	19
1662-001	Boots, with legs up to 16 centimeters high	21	20
1663-001	Boots, with legs 16 to 22 centimeters high	75	72
1664-001	Boots, with legs exceeding 22 centimeters high	607	549
1666-001	Footwear, n.e.s., 16 to 22 centimeters long, without silk	44	43
1667-001	Footwear, n.e.s., over 22 centimeters long, without silk	27	24
Group 74	Manufactures of horn, bone, and other animal materials, and similar materials	7	[1]
Group 75	Paper and paperboard	4,132	1,107
1697-001	Paper and paperboard wares, not specified	94	77
1700-001	Paper bags and sacks, n.e.s.	82	68
1701-002	Paper bags and sacks, with fabric	289	3
1702-001	Empty boxes, of paperboard or cellulose	24	15
-002	Valises and trunks, of paperboard or cellulose	55	[1]
1704-003	Paperboard or corrugated paper prepared with pitch	34	33
-011	Paperboard of vegetable fibers, impregnated with pitch	35	[1]
1715-011	Paper, for newspapers, periodicals, books, etc.	845	67
-021	Paper, for covers of periodicals	192	15
	Paper weighing less than 150 grams per square meter (excluding wrapping paper):		
1717-001	White or slightly tinted, with animal sizing	303	7
1718-001	"Couché" (coated on both sides with mineral substances)	128	55
1721-001	Cigarette paper, on reels	186	29
1723-001	Sensitized paper for reproducing plans	136	129
1724-002	Sensitized photographic paper	371	116
1726-001	Paper, with a layer of wax, for use by reproduction machines	34	26
-004	Paper, with a layer of material other than fabric, for use by reproduction machines	18	18
1727-001	Carbon paper	34	23
-002	Cellophane	28	17
-003	Gummed paper in rolls	96	29
1729-002	Paper, cut in special shapes	45	33
1730-003	Paper, weighing less than 22 grams per square meter	49	1
1734-011	Paper and paste, for filtration or putting up goods	68	27
1735-002	Paper, for registering apparatus	80	59
1739-016	Paper, weighing 22 to 150 grams per square meter, other than rag, gum or wrapping paper	90	34

Table 14.—Imports of Miscellaneous Manufactured Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued.

[Thousands of dollars]

Tariff number	Description	Imports	
		Total	United States
Group 75—continued			
-023	Paper, weighing more than 150 grams per square meter, other than bookbinding or wrapping paper	194	83
-031	Paper for manufacturing machine tabulating cards	242	22
Group 76	Printed matter and engravings on paper or paperboard	5,073	1,306
1747-001 to -003	Commercial advertising matter, n.e.s.	33	17
1751-001	Decals, in any form	34	4
1757-001	Commercial catalogues	73	27
-003	Printed or manuscript books	4,144	1,060
-004	Printed or manuscript magazines	630	129
-005	Publications, printed or manuscript, n.e.s., other than newspapers	35	4
1760-001	Writing paper and envelopes with monograms, initials, letterheads, etc.	20	15
Group 77	Arms and ammunition	544	17
1763-006	Rifles, other than carbines	301	3
1772-001	Cartridges and cartridge cases, metal, filled	159	132
1773-001	Primers	36	[1]
Group 78	Jewelry, gold- or silversmith's wares, clock- and watch-makers' wares	537	17
1779-001	Movements and other parts for watches, n.e.s., other than cases not of precious metal	37	[1]
1791-002	Wrist watches, in ordinary metal cases, whether or not plated or inlaid with precious metals	331	1
1792-002	Alarm clocks, musical or not	73	[1]
Group 79	Articles and instruments for the sciences, fine arts, and applications thereof	12,186	4,960
1801-001	Spectacles, with frames	46	17
1804-001	Prismatic binoculars	53	12
1805-001	Protective glasses and goggles	70	59
1808-013	X-ray producing apparatus	838	210
-014	Spare parts for X-ray apparatus and other current producing apparatus in No. 1808	68	29
1810-001	Scales, automatic, n.e.s., with a capacity exceeding 50 kilograms	90	59
-002	Weighing machines, automatic, n.e.s., with a capacity exceeding 50 kilograms	178	17
-003	Dynamometers, automatic, n.e.s., with a capacity exceeding 50 kilograms	72	72
-004	Steelyards, automatic, n.e.s., with a capacity exceeding 50 kilograms	35	7
1814-001	Precision scales, characterized by a graduated chart	46	12
1815-001	Scales, n.e.s., other than nonautomatic	32	6
1816-001	Biographs, cinematographs, and similar apparatus	152	85
1817-001	Calipers, for measuring diameters or thicknesses	66	34
1822-001	Artificial acrylic teeth	18	18
1823-001	Loudspeakers	45	13
-003	Electric phonographs and radiophonographs	196	12
-005	Record turntables and changers	39	30
-006	Radio receivers	552	55
-007	Telephone receivers and transmitters	531	313
-008	Apparatus similar to electric phonographs, radios, turntables, etc., other than mechanical phonographs, n.e.s.	97	50
-009	Parts for receiving apparatus, etc.	1,042	333
-011	Television sets	149	74
-012	Recorders, other than dictation machines	91	33
1824-001	Exposed movie film, positive or negative, including new or used movie film, other than educational films	403	233
1826-001	Assay and cupelling ovens	32	18
-002	Utensils, n.e.s., for assaying and cupelling	505	364
1827-001	Scientific hand instruments for professionals, including parts	305	71
1828-001	Machines and apparatus for pure and applied science, n.e.s., other than escaped gas detectors, and electromedical apparatus	894	380
1847-001	Accordions	60	[1]
1854-001	Hypodermic syringes	70	13
1855-003	Photographic cameras, not movie or aerial	40	8
1856-002	Calculating machines and apparatus	1,094	769
-005	Spare parts for adding, calculating and similar machines	297	185
-006	Adding machines, electrical	385	29
-007	Adding machines, manual	156	[1]
-008	Statistical and similar machines, with calculating functions	189	[1]
1857-001 to -019	Typewriters	666	95
-020	Spare parts for typewriters	294	110
1858-001	Manuscript-reproducing machines	89	56
-002	Similar manuscript-reproducing apparatus, including addressing machines, other than portable mimeographs	43	28
-003	Spare parts for manuscript-reproducing machines	40	23
1861-001	Educational materials, other than furniture, imported on behalf of educational establishments, even if specified under another tariff number	31	8
-011	Educational apparatus, accessories and instruments, n.e.s.	53	13
1863-002	Photographic film, unexposed	605	304
-003	Radiographic plates	37	29
-004	Photographic film, exposed, but not printed	159	46
1867-001	Barometers	35	8
-002	Hygrometers	39	6
-003	Manometers	145	106
-006	Thermometers, for any use	171	84
-007	Meterological apparatus, n.e.s., other than rain gages	440	217
-008	Spare parts for meteorological apparatus	36	30
1868-001	Prepared moulding compositions for dentists	42	17
Group 80	Works and objects of pure art	20	3
Group 81	Various manufactures and products	9,075	2,648
1885-001	Vacuum bottles and parts	48	7

Table 14.—Imports of Miscellaneous Manufactured Products, by Commodity Groups and Principal Commodities, Total and From the United States, 1964—continued.

Tariff number	Description	Imports Total	Imports United States
Group 81—continued			
1886-003	Orthopedic apparatus, n.e.s., other than trusses or fracture splints	33	31
1887-001	Educational equipment sets for pure and applied science, including microscopes	237	27
1899-001	Material imported for use of the Chilean state	1,843	38
-011	Military equipment and articles for making uniforms	3,087	1,159
-021	Spare parts, accessories, etc., n.e.s., imported by the Chilean National Airline	170	149
1903-001	Travelers' baggage	399	167
1904-001	Carpet sweepers, mechanical	40	16
1915-001	Toys, of plastic and similar materials	56	4
1916-001	Toys, mechanical	77	4
1917-001	Toys, n.e.s., other than games, or of marble	116	10
1936-001	Refrigerators, up to 10 cubic feet capacity	67	29
-002	Refrigerators, more than 10 cubic feet capacity	107	85
1943-001	Fishing tackle (primarily commercial)	2,478	786
	All commodity groups, total	44,898	16,690
	Listed principal commodities, total	42,559	15,523
	Principal commodities as percent of total all commodity groups	94.8	93.0

[1] Equals zero or less than $1,000.
Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.
Note: Principal commodities include all items for which total imports exceed $30,000, or imports from the United States exceed $15,000.

Wood, Cork, Rubber, Plastic

Wood Manufactures and Cabinetmaker's Wares of Wood or Sawdust. The group, wood manufactures, and in the group, cabinetmaker's wares of wood or sawdust, totaled only $565,000 in 1964. Chile's important lumber industry supplies the nation's requirements and has been increasing its exports of sawn lumber. Domestic woods are used by the furniture industry, which supplies domestic needs, and by plants that turn out plywood, veneer, cooperage, shingles, millwork, and other wood products. About 250 plants manufacture wood products, other than veneer, of which about 220 reportedly do millwork. Some are run in conjunction with sawmills, but the majority are separate lumberyard operations turning out standard planning mill products, such as strip flooring, window sashes and frames, interior finish and trim, moldings, and exterior sidings and finish.

Only a handful of firms produce plywood, veneer, hardboard, insulated wallboard, and shipboard. Most imports of wood products are into the free ports.

Cork Manufactures and Their Wares. Imports of cork manufactures and their wares totaled $20,000 in 1964 and consisted almost entirely of stoppers that came from Spain.

Manufactures of Rubber, Plastic and Similar Materials. More than one-half of the value of total imports in this group was produced by sales of tubing and hose-piping. Manufactures of plastic materials accounted for perhaps one-fifth of the $2.7 million total. Sales by the leading supplier, the United States, averaged $1.0 million during 1962-64.

The Chilean rubber manufacturing industry meets most of the country's needs of industrial rubber products, such as sheeting, rings, bands, hose and tubing, rubberized fabric, foam rubber, and elastic webbing; rainwear; soles and heels and footwear; druggists' sundries; and latex-dipped goods.[16]

The Chilean plastics manufacturing industry has made great strides in recent years and should progress even more rapidly because of the stimulus provided by the expected expansion of plastic raw material production (described under the section dealing with chemicals). The bulk of production is accounted for by a few firms, but there are many others which perform small injection-molding operations. The industry produces a wide variety of plastic products, such as toys, radio cabinets, telephone shells, safety helmets, wiring devices, insulating materials, watermeter parts, brake linings, bottle and tube tops, artificial flowers, buttons, garden hoses, combs, and other household wares. Most of the imported plastic products, particularly those for personal use, such as mechanical pens and pencils, enter into the free ports.

Tannery Products, Furs, Bone

Tannery Products, Furs, and Their Derivatives. Imports in this group totaled $835,000 in 1964, almost all of which were boots, primarily high boots. The United States supplied nearly all of such imports. The hide and shoe industry are two of Chile's oldest industries. Sixty-five tanneries were in operation in 1963, with 30 of these accounting for most of the production. Three firms process chinchilla, silver fox, and seal. The industry has modernized its equipment but is facing increased competition from plastics and other substitutes. One factory processes waste leather and soles. Perhaps 80 percent of Chilean leather production

[16] Imports of tires are dealt with under Automotive Equipment.

is used by some 75 relatively large or medium-sized factories and some 500 small shoe-repair shops which manufacture in excess of 16 million pairs of all types of footwear annually (this at 70 percent capacity). Quality standards are excellent, and Chile has had considerable success in marketing its shoes abroad.

Manufactures of Bone, Horn, or Other Animal Materials, Not Elsewhere Mentioned. Imports of the manufactures in this group, manufactures of bone, horn, or other animal materials, not elsewhere mentioned, are negligible.

Paper, Printed Matter

Paper and Paperboard. Imports of products in this group, paper and paperboard, have ordinarily totaled between $3—$5 million dollars during recent years, with the United States supplying about 25 to 30 percent of the market. Sales by Finland ordinarily approach in value those by the United States; the U.S. sales totaled $1.1 million in 1964. Since Chile is self-sufficient in the principal paper products, and is rapidly increasing its exports to LAFTA markets, imports consist almost entirely of a wide variety of fine and specialized paper products.

Chile has experienced rapid growth in its paper and paperboard industry, spurred by an equally great increase in Chilean pulp production. Production includes wrapping paper, machine glazed and standard papers, newsprint, Kraft paper (including machine glazed and finished), cement bags, small bags, corrugated cardboard, printing paper, toilet paper, towels, and wallpaper. Chile shortly expects to supply tabulating card stock for both domestic and LAFTA consumption.

Printed Matter and Engravings on Paper or Paperboard. Printed books and magazines are the principal imports in this group with books representing 81.5 percent of the total in 1964 ($5.1 million). The favorable customs treatment accorded books and magazines because of their educational, scientific, or cultural value has supported a general rise in the level of such imports. In recent years, the customs authorities have been more strict in application of the above standard in the allocation of scarce foreign exchange. Argentina is ordinarily the principal supplier of imports, usually accounting for one-third of the total. The U.S. position in this market has improved recently, largely on the strength of technical publications. It averaged one-fourth of total sales in 1963-64. During the same time, Spain averaged one-fifth of the market. Mexico also supplies a substantial quantity of such imports.

Other Items

Arms and Ammunition. Imports of the items in this group are very limited—mostly rifles and cartridges—and totaled $544,000 in 1964. Italy was the principal supplier then, with $291,000, followed by the United States with $156,000. Belgium, West Germany, Sweden, Switzerland, and the United Kingdom have been significant suppliers from time to time. A special prior import authorization is required for the importation of firearms, munitions, or explosives into Chile.

Jewelry, Gold- or Silversmith's Wares, and Timekeeping Wares. Imports in this group have dwindled because of severe restrictions on the importation of items classified as luxury goods and totaled only $537,000 in 1964. Watches, watch movements, and alarm clocks accounted for more than four-fifths of such imports, most of which entered through the free ports. Switzerland and West Germany have been the principal suppliers of such products. The United States has not been a significant supplier in recent years.

Articles and Instruments for the Sciences and Fine Arts, and Their Applications. This group continues to be the largest in the miscellaneous manufactures category, representing slightly over 27 percent of such imports in both 1963 and 1964. However, the $12.2 million total for this group in 1964 represents a decline from 1961 when it reached $19.2 million and accounted annually for between 35 and 41 percent (1957-62) of the value of miscellaneous manufactured imports.

The group is a diverse one, as is indicated by a listing of its major components: X-ray apparatus; weighing devices; radio receivers, telephone receivers and transmitters, and their parts; assaying and cupelling apparatus; scientific hand instruments; calculating and other statistical machines; typewriters; photographic film; and meteorological apparatus.

The decline in the U.S. share of this market has been arrested, and it showed some improvement in 1964, reaching 40.6 percent ($5.0 million). Substantial sales were made in all the above categories except scales and weighing machines and typewriters. West Germany, which had held the first position as late as 1962, slipped to second with 28.1 percent of the market in 1964, with sales heaviest for X-ray apparatus, phonographs, radio receivers and their parts, scientific apparatus, and meteorological apparatus. Argentina and Brazil have supplied more and more office machines in recent years.

Only a very small volume of professional and scientific instruments is manufactured in Chile. Surgical instruments for doctors and dentists and scientific and processing equipment are imported on account by importers for wholesale or retail. Equipment with a more limited market, such as X-ray apparatus, microscopes, and advanced laboratory equipment are ordered by purchasers through representatives or agents in Chile. The Government's growing attention to improving public health facilities should

lead to larger equipment purchases by Government hospitals and institutions.

Local manufacturers do not now supply office machines. Some typewriters have been assembled in Chile, but demand has not supported operation of an assembly line except on an intermittent basis. However, Remington Rand Chile, Ltda., announced plans in late 1965 for producing typewriters on a regular basis with a view toward exporting to LAFTA. The first stage would involve 100 percent assembly of imported parts. But eventually, 60 percent of the finished product would be of domestic components.

Chile manufactures a substantial quantity of radio receivers, phonographs, and radio parts, such as transformers, resistors, rectifiers, tubes, chassis, loudspeakers, and cabinets. Some eight firms produce most of these, but a considerable number of smaller firms also do some assembly. Television sets are assembled in Chile, employing some domestically produced electron tubes, transformers, and resistance bridges. Until recently, assembly was carried out for the most part in Arica because of customs advantages. Concerned with high prices for such sets, the Government placed them under price controls, and recently authorized two firms to assemble sets in Santiago. While there is as yet no commercial television in Chile, two universities carry out limited broadcast operations.

The Radio Broadcasting Association of Chile (ARCHI) recently obtained a concession from the Chilean Government to establish a commercial corporation, the Compania Nacional de Radio y Television, S.A. This company imports the equipment and parts required by the some 50 radio broadcasting members of ARCHI, and will be in a position to provide television equipment if, and when, commercial television is permitted in Chile.

Chile is almost entirely dependent on imports for its photographic equipment and supplies. Some cameras and accessories, although prohibited imports, enter through the free ports, and a small number of box cameras are produced locally. The use of color film has grown in popularity, despite high cost for film and processing, and there are some six laboratories which handle color film.

Works and Objects of Pure Art. Imports in this group are negligible, totaling only $20,000 in 1964.

Various Manufactures and Products. This group, which once represented less than 10 percent of miscellaneous manufactured imports, in 1964 accounted for 20.2 percent of such imports. A great deal of the rise can be attributed to sales of commercial fishing gear for the northern fishmeal operations. The shortage of fish during the 1964 and 1965 seasons produced a movement toward consolidation of the northern fishmeal industry and generated interest in exploitation of the food-fish resources of central and southern Chile.

Purchases by the Chilean military are ordinarily made by public bid. Toys still enter through the free ports, as do small refrigerators. Large refrigerators, which are not produced in Chile, are permitted entry.

CHAPTER IV

Distribution

MARKETING CHANNELS

Santiago is the principal distribution center for Chile. Perhaps some 2.4 million of Chile's estimated 8.9 million inhabitants live in Greater Santiago, and almost three-fifths of the population live within a hundred-mile radius of the capital. By far the greatest number of import houses, distributors, and agencies have their headquarters in Santiago, although some serve the Santiago trading area from offices in the port city of Valparaiso, 50 miles away. CORFO, in early 1966, completed a study of a projected industrial park in Valparaiso; the park may eventually make establishment of representation there even more attractive. The trade territory of Santiago extends from a little north of Valparaiso to Curico in the south. The territory roughly encompasses the Provinces of Santiago, O'Higgins, Colchagua, and the northern part of Curico. Many of the import outlets situated in Santiago provide nationwide distribution through branch offices in other cities, or through traveling salesmen who canvass the entire country.

Representatives for many exporters who wish to sell in southern Chile, locate in Concepcion. It is situated in one of the areas with the greatest industrial growth potential in Chile. It will be the site of an important component of Chile's projected petrochemical industry. Chile's steel mill is already located there, providing a stimulus to metal-working industries. Electric power capacity is being greatly increased to supplement existing coal resources in the area. Talcahuano is the port for Concepcion, but construction will begin shortly on new port facilities on nearby San Vicente Bay.

Some independent outlets are established in the remote free port city of the far south, Punta Arenas, which serves the wool and petroleum area of Chile.

Antofagasta has been selected by some to provide sales coverage of northern Chile. Arica, because of its assembly industries and free-port status, has been the choice of others. In many cases, this is probably the only market of any significance for consumer goods. However, Arica's free-port privileges have been greatly curtailed in past years and are likely to be even further curbed.

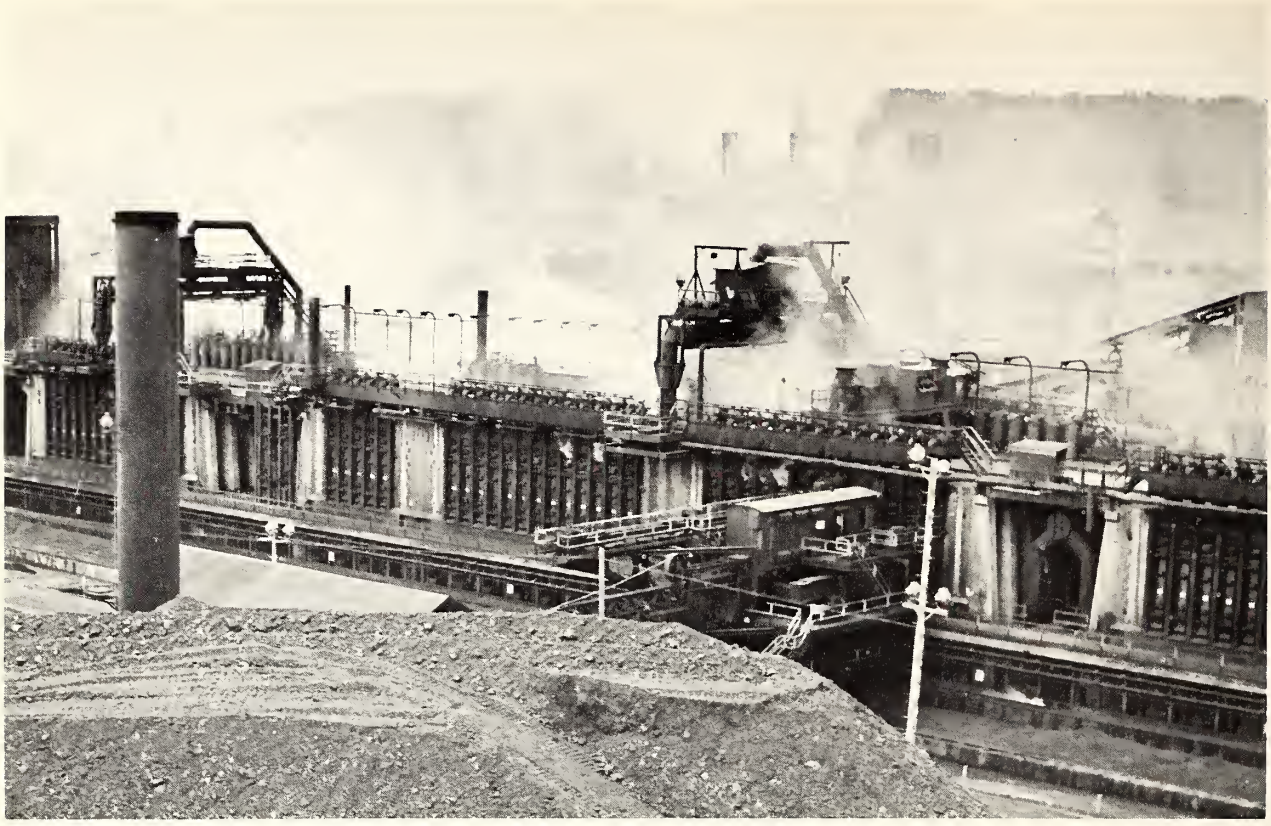
A brief description of the economy of these regions and their principal cities is contained in Appendix B.

REPRESENTATION

The four principal types of import representation preferred in Chile are import houses, commission agent, direct purchase, and subsidiary or branch.

Whatever type of representation is decided upon, the exporter should, if possible, make a personal visit to Chile for the selection of a suitable agent and for firsthand observation of local conditions. Success in selling a product will very often depend on the ability of the exporter to make friends with his agents and clients and to understand and adjust to conditions

A CHILEAN GARY, INDIANA: Steel mill of Cia. de Acero del Pacifico, Talcahuano, Chile.



STEEL MILL: Coke ovens of Cia. de Acero del Pacifico, Huachipato, Chile.

which may vary greatly from those with which the exporter is accustomed in the United States. This is so because the average Chilean businessman places a high value on good personal relations and because he often faces severe obstacles to doing business ranging from domestic credit restrictions to complicated and ever-changing import restrictions.

The largest mining companies in Chile do almost all their purchasing through central procurement offices in New York.

Frequently, import houses are large and well-financed concerns which import on their own account but will also agree to represent an exporter on a commission basis. Many of these firms have head offices in Santiago and maintain branch houses or agencies throughout the country. A number of the large firms represent foreign interests, including U.S., British, and German, but most are owned by Chilean nationals. This method of importing offers the exporter considerable financial security because of the risks assumed by the import houses but suffers from the fact that many of the houses have far too many lines to carry out effective promotional activities for a particular product.

The commission agent is the most common type of representation. Particular care should be taken to insure that the agency selected has sufficient standing and financial ability to offer adequate representation. In many instances, agencies are far too busy to promote a new product effectively. Frequently, the best type of representation, and the one generally preferred, is the agent who specializes in a small group of similar but noncompetitive products. Because the agent is paid a commission of from 2.5 to 10 percent, depending upon the product line, the exporter may expect more aggressive representation and can maintain control over his product. However, his financial risk is greater than with other forms of representation since there are few agents willing to assume financial risk.

The large mining companies, agricultural estates, state enterprises, commercial airlines, public utilities, and government agencies frequently import their own machinery and supplies. They buy direct. The largest private importers are the large copper and iron ore mines.

The establishment of a local subsidiary or branch gives the greatest guarantee that the exporter will obtain efficient and aggressive promotion of his product. But this method involves a considerable investment and can only be justified when sales are made in volume or when local servicing facilities and inventories are required.

GOVERNMENT PURCHASING

Government entities, more often than not, do their own procurement. Chilean law calls for public bids for such purchases, although procurement by negotiation is permitted in certain cases. Chilean Government agencies with offices in the United States include:

Chilean Development Corporation (Corporacion de Fomento de la Produccion). Investment, trade promotion, financing and purchasing of capital equipment for industrial and agricultural development projects. 80 Pine Street, New York, N.Y., 10005.

National Petroleum Enterprise (Empresa Nacional del Petroleo). Engineering and purchasing. 80 Pine Street, New York, N.Y. 10005.

National Electric Power Enterprise (Empresa Nacional de Electricidad). Engineering and purchasing. 80 Pine Street, New York, N.Y., 10005.

Chilean State Railways (Empresa de los Ferrocarriles del Estado). Financing and purchasing of rail equipment. 80 Pine Street, New York, N.Y., 10005.

Chilean National Airlines (Linea Aerea Nacional). 500 Fifth Avenue, New York, N.Y., 10005.

Chilean Nitrate Sales Corporation, Chilean Iodine Bureau. 120 Broadway, New York, N.Y., 10005.

Chilean Military Mission. 1736 Massachusetts Avenue, NW., Washington, D.C., 20036.

Chilean agencies which make direct purchases and also have offices in Santiago, include:

Ministry of Public Works (Ministerio de Obras Publicas)

Ministry of Defense (Ministerio de Defensa)

Chilean State Urban Transport System (Empresa de Transportes Colectivos del Estado)

State Maritime Company (Empresa Maritima del Estado)

National Mining Enterprise (Empresa Nacional de Mineria) Purchases for small mines.

Agricultural Commerce Enterprise (Empresa de Comercio Agricola) Monopoly importer of many agricultural products.

Chilean Port Authority (Empresa Portuaria de Chile)

State Telegraph Service (Telegrafos del Estado)

This list is not exhaustive, and other agencies import from time to time.

SELLING THE TRADE

Credit Information and Advertising

Credit information is readily available in Chile. The sources for such information are described in Chapter V: Marketing Aids.

Advertising methods used in Chile are similar to those in the United States. However, advertising is not as widespread in Chile, and the approach is somewhat more restrained with emphasis upon the practical advantages of the product. In 1964, the press accounted for 51 percent of all advertising expenditures, radio for 35 percent, outdoor display for 9 percent, movies for 4 percent, and television for 1 percent, according to the International Advertising Association. [17] There is no commercial television in Chile, and advertising in that medium has been on a limited experimental basis only.

There are some 30 advertising agencies in Chile. Almost all of them are located in Santiago from where they provide coverage for the entire country. Most are small, except two or three Chilean firms and four foreign firms. The latter includes the subsidiaries of three U.S. firms: Grant Advertising (Chile), Ltda.; J. Walter Thompson Chilena, SAC; and McCann-Erickson Corp. y Cia., Ltda. These "foreign" firms are generally staffed entirely by Chilean nationals, including top management, receive no financial help, and remit no profits to their parent operations.

The foreign firms and one or two of the larger local firms handle most of the international accounts. They are fully equipped to do translation and original work for their clients. They write texts for advertising, prepare visual copy, plan advertising films, prepare recordings, plan sales promotion campaigns, design containers, decorate offices and stores, and place billboard advertising. Some of the agencies carry out spot checks of radio and press advertising throughout the country. The larger firms use direct-mail lists, while others use city directories.

There is an advantage in dealing with one of these international agencies since they charge international rates. If one excludes special items, such as artwork, printing costs, and actors' fees, the cost of placing advertising is very low, since the larger agencies draw much of their income from a 15-percent commission obtained from the medium which carries the advertising. Smaller agencies, however, usually charge an additional fee.

Newspapers are among Chile's most important advertising media. Chile's free press is very influential. Its influence is partly the result of Chile's having one of the highest literacy rates in Latin America. There are more than 34 newspapers in Chile, 10 of them in Santiago. Many of them reflect the viewpoints of various political groups. Several of the Santiago papers such as *El Mercurio*, *La Nacion* and *El Diario Illustrado* have a wide distribution in Santiago and throughout the country. *El Mercurio* has the largest circulation, followed by *La Nacion*, which is supported by the Government. Newspapers in Valparaiso, Concepcion, Antofagasta, and other cities also have large circulations.

A number of magazines enjoy mass circulation. Among the most popular are *Vea*, *Ercilla* and *7 Dias-Zig Zag*. *Reader's Digest* and *Life* are circulated in

[17] *The Gallatin Statistical Annual 1966*, Copley International Corporation, 1966.

Spanish, and a Latin American English edition of *Time* is also popular. The Spanish edition of *Vision* is published in Mexico and has become increasingly popular.

There are relatively few trade journals. They include: *Industria*, published monthly by the Sociedad de Fomento Fabril (an organization similar to the National Association of Manufacturers); *Construccion*, published monthly by the construction industry's association; *Panorama Economica*, a privately published monthly dealing with economic and commercial problems; and *El Campesino*, a monthly published by the National Agricultural Society.

There are about 100 AM and FM broadcasting stations in Chile, some 30 of which are in Santiago. All stations are commercial, with the exception of four belonging to educational institutions and one partially owned by the state in Arica. Most stations are on the air from about 7 a.m. till midnight. There are a few 24-hour stations. All stations broadcast a great variety of programs, with a strong emphasis on popular music and news at most stations. FM stations carry fewer commercials than AM and often feature semi-popular and classical music. There are between 1 million and 1.5 million radio sets in use in Chile.

There are two television channels in Santiago and one in Valparaiso. Each is operated by one of Chile's leading universities. A national debate has been going on for some time over the question of whether to permit commercial television. Transmission hours are restricted for the most part to evening hours, terminating at about 11 p.m. Programs include a variety of subjects directed mostly to adult viewers, but there are some children's shows. The U.S. television shows with dubbed Spanish voices are popular. Advertising has been on an experimental basis, with the restriction that advertising is permitted only at the beginning or end of a program. Since most of the U.S. shows originally had inserted advertisements, there is more time between regular programs than in the United States. Television sets are very expensive in Chile. There are probably somewhat less than 50,000 in operation throughout the country. The Government has been experimenting with their use in education and community development work.

Advertising in Chile's motion-picture theaters, of which there are more than 350, is both effective and economical. Other forms of advertising include billboards, direct mail, posters in public transportation, and neon signs.

Market Research

Marketing research is relatively new in Chile, but there is a growing appreciation of the value of preliminary surveys offered by market research organizations. Local companies are beginning to use such services, but most of the companies probably continue to form their plans on the basis of past sales experience and on their agent's estimates of the market. Until recently, the large U.S. advertising agencies had dominated the market-research field. A handful of local and foreign specialized firms has now entered the field, and one of the U.S. advertising agencies has established a separate market research organization.

Practices

Most sales involve credits timed to mature at the end of the minimum legal waiting period for payment. The official delay is now[18] 80 days from the date of shipment. Most escudo payments, including those financed by AID program-loan funds, are effected within a month after the end of that period. Some payments are made by confirmed letters of credit, but the Government has severely limited the volume of these letters. Under a special program for the financing of high-priority capital goods imports, an increasing volume of AID-financed imports will go under confirmed letters of credit.

Chile's improving foreign exchange position is expected to result in the continued further reduction of payments delays. Once the backlog of payments is cleared up, however, the scarcity of local credit and the competitive nature of the market will probably lead many established importers of good standing to ask for terms of 60 to 180 days sight, documents against acceptance.

Following debt renegotiations with its creditors in January 1965, the Central Bank initiated new efforts to clear up commercial arrearages and limit increases in short- and medium-term credits. Consequently, Chilean importers are now asking suppliers for 8-year terms on goods formerly sold on three to 5-year credits.

In quoting prices, Chilean importers generally prefer c.i.f. quotations. This permits them to calculate more readily the total cost of the merchandise at the Chilean port, particularly since many customs charges are in terms of the c.i.f. value.

While the United States still has probably the best reputation for quality, economy-minded Chileans, including the Government, may often pass over better quality U.S. products in favor of lower priced goods from other countries. Because such importers are frequently motivated by restricted budgets, tight domestic credit, and rationed foreign exchange, they are often unwilling to pay higher prices for specialized or high-volume types of machinery and equipment made principally for more industrialized countries.

Price controls are maintained on an increasing number of commodities. Such articles are defined as items of prime necessity and consist almost entirely of

[18] August, 1966.

CHILE'S PRINCIPAL CITY: Santiago is the headquarters for most of the major commercial, industrial, distributing, banking, and mining enterprises.

products for mass consumption. These controls are part of the Government's program to bring inflation gradually under control. Agricultural prices are being permitted to rise more rapidly than prices for industrial goods as part of a policy to stimulate the lagging agricultural sector.

Business correspondence, catalogs, price lists, and instructions for use or operations of products should be in Spanish. The U.S. firms are urged to give full particulars and detailed descriptions as soon as possible after opening negotiations with a prospective buyer. Cablegrams and other correspondence which must be sent in English should be clear and detailed, avoiding abbreviations and U.S. colloquialisms. American manufacturers who contemplate entering the Chilean market should register their trade names and trademarks.

Chile operates on the metric system of weights and measures. It is worthwhile for the U.S. supplier to give specifications in terms of the metric system, since almost all of his foreign competitors do so automatically.

Information on shipping documents may be obtained from freight forwarders doing business with Chile, and from the Commerce and Industry Association of New York, New York. Inquiries may also be sent to the nearest Department of Commerce Field Office or to the American Republics Division, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C., 20230. Particularly close attention should be given to AID documentation requirements since the Chilean Government requires that appropriate AID documentation be submitted for all shipments from the United States, whether or not they are known to be AID-financed. Improperly executed AID documentation has been one of the principal causes in payments delays for shipments to Chile. Inquiries concerning

AID documentation requirements should be directed to the Office of Material Resources, Agency for International Development, U.S. Department of State, Washington, D.C., 20523.

Warehousing facilities are found in the principal ports and other commercial centers. Both refrigerated and nonrefrigerated storage facilities exist in Valparaiso and in other ports of entry. In addition to publicly owned storage space, there are a number of privately owned warehouses. The Government regards fiscal warehouses as facilities for temporary storage, and storage charges are set on a progressively rising scale.

Trade Associations

The Central Chamber of Commerce of Chile—Camara Central de Comercio de Chile—is an association of chambers of commerce throughout Chile, with headquarters in Santiago. Those of Santiago, Valparaiso, and Concepcion are the largest, but most towns of any size also have one. The Central Chamber of Commerce and Chamber of Commerce of Santiago are located at Ahumada 341. The Chamber of Commerce of the United States of America in the Republic of Chile is located at Bandera 84 in Santiago. Its members are U.S. businessmen and firms and Chilean firms

CHILE'S PRINCIPAL PORT: Longshoremen at Valparaiso's waterfront prepare melon crates for shipment to the U.S.

which represent U.S. firms. Membership lists for this organization are available, and it publishes business inquiries from the United States in its monthly newsletter. The National Association of Importers is organized to promote the interests of importers and publishes an informative newsletter. There is a similar organization of Chilean exporters.

The Sociedad de Fomento Fabril—manufacturers association—at Monedas 759 can answer many questions about Chilean industry, or can direct the inquirer to one of its many member associations which represent specific industrial sectors. The Sociedad Nacional de Agricultura at Ponderini 187, Santiago, and the Sociedad Nacional de Mineria at Monedas 759, Santiago, may be helpful on questions relating to agriculture and mining.

Transportation

Ocean Shipping and Ports. Three principal trade routes connect the United States with Chile. The first extends from the United States Atlantic ports through the Panama Canal to the west coast of South America; the second connects United States Pacific ports with the west coast of South America; and the third joins United States Gulf ports (via the Panama Canal) with Chile.

Three conferences (shipping associations) regulate much of the scheduled trade between the United States and Chile. Their names are descriptive of the areas served: (1) Atlantic and Gulf-West Coast of South America Conference, (2) Latin America-Pacific Coast Steamship Conference (north-bound and south-bound), and (3) West Coast of South America-North-bound Conference.

Chile's two international shipping companies and the U.S. Gulf and South American Steamship Co., Inc. (Gulfsa) are modernizing their fleets. The first of the new fleet of five modern cargo vessels of Gulfsa arrived in Valparaiso June 3, 1964. These ships make the Valparaiso-New Orleans run in approximately 15 days. Cia. Chilena de Navigacion Interoceanica has added two new vessels to its fleet, which serves South American ports via the Straits of Magellan. Constructed in West Germany, they are modern cargo vessels with comfortable passenger accommodations. CSAV, which serves the west coast of South America and U.S. Gulf and Atlantic coasts, has announced the placing in service of the first of four new ships of 10,500 deadweight tons each. These vessels, constructed in Japan, will each have 100,000 cubic feet of refrigerator capacity. Three combination cargo-passenger ships and five freighters of the Grace Line alternate in providing weekly services between New York and the full range of Pacific Coast ports to Chile, with calls north and south bound at other U.S. Atlantic ports as cargo requirements dictate. There is Grace service approximately once a month from U.S. Pacific coast ports to Chile, with calls at Mexican, West Coast of Central America, and other West Coast South America ports. Further information on the Chilean merchant marine is contained in Chapter III: Commodity Analysis, under Transport Machinery, Materials and Accessories.

A National Port Authority, Empresa Portuaria de Chile, a semi-autonomous entity, was created by the Chilean Government in May 1960 and charged with the responsibility of operating the 10 ports handling 80 percent of the cargo moving in and out of Chile. These ports are, from north to south: Arica, Iquique, Antofagasta, Coquimbo, Valparaiso, San Antonio, Talcahuano, Valdivia, Puerto Montt, and Punta Arenas. The 50-odd other ports in Chile, except those which are privately owned, were left under the control of the Ministry of Public Works. Of these, by far the greatest value and volume of imports enter through Valparaiso. Most of Chile's exports, predominantly minerals, move through Coquimbo and Chile's 16 important private ports devoted to loading or discharging bulk cargoes. The private ports are generally efficient, with facilities such as belt-loaders or pumps for rapid transfer of cargo. Of those ports, Huasco, Tocopilla, and Chanaral move most of the cargo, which consists primarily of exports. Table 25, Appendix D shows the total value and weight of goods imported and exported through Chilean ports in 1964.

Airlines. LAN provides both domestic and international service. LAN's domestic services radiate from Santiago northbound to such points as Antofagasta, Iquique, and Arica and southbound to Concepcion, Puerto Montt, and Punta Arenas. Its international services connect Chile with Argentina, Uruguay, Bolivia, Peru, and the United States. LAN is a member of the International Air-Transport Association (IATA). A smaller company, Linea Aerea Sud Americana, also provides domestic service.

Foreign lines connecting Chile with other countries include Aerolinas Argentinas; Aerolinas Peruanas; Air France; Alitalia; Canadian Pacific Airlines Ltd. (CPA); Lineas Aereas Espanolas (Iberia); Lineas Aereas Suizas (Swissair); Lufthansa (German); Pan Air do Brasil; Pan American-Grace Airways (Panagra); Real Aerovias Brasilia; Royal Dutch Airlines (KLM); and Scandinavian Airlines System (SAS).

Currently, Chile's air transportation system operates in all major cities via 9 primary airports and 20 secondary fields, the majority of which are slated for improvement under the country's 10-year development plan. New airports are under construction at Concepcion and Santiago, the latter designed to accommodate the largest jet aircraft.

LAN inaugurated both national and international jet flights in 1964 with the purchase of three Caravelles.

The international service includes Santiago-Miami (with stops at Lima and Panama City) and Santiago-Buenos Aires-Montevideo flights. Santiago and Arica are connected by six jet flights weekly.

Railways. Chile's railroad system serves all of the important industrial mining and agricultural centers north of Puerto Montt. The railways, 80 percent of which are Government-owned, extend north to south from Zapiga, 192 miles south of Arica in the north, to Puerto Montt, or, a total distance of 1,960 miles. Branch lines provide service from east to west. Five of these lines provide international rail service to Bolivia and Argentina. There are several private lines which are fundamentally adjuncts of specific industries.

Highways. The Pan-American Highway (commonly known as the Longitudinal Highway) forms the backbone of Chile's road system. It is hard-surfaced and runs, with a few very short incomplete sections which should be completed in the near future, from the border north of Arica to Puerto Montt. The initiation of ferry service to the Isle of Chiloe in 1964 permits an extension to Queullin, its southern terminus. Transverse highways lead from it to the important seaports and industrial and agricultural areas. These, in turn, are crossed by feeder-type roads in many locations. The entire road system approximates 35,000 miles, about half of which is usable the year around, since little more than 3,000 miles of the system is all-weather surfaced. Considerable work remains to be done, particularly on the transverse system of the south.

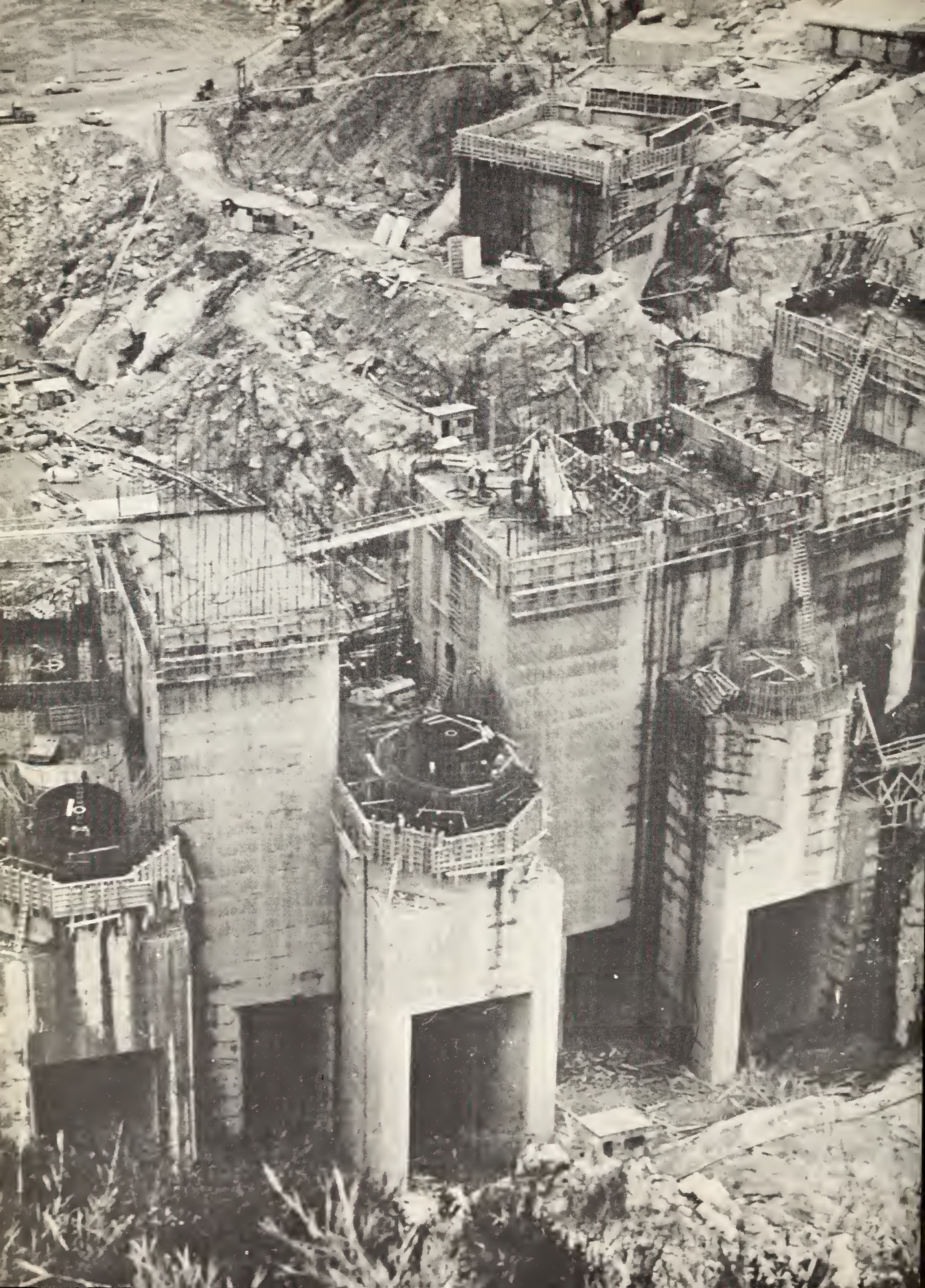
Government Representation

The Embassy of Chile is located at 1736 Massachusetts Avenue, NW., Washington, D.C., 20036. Chilean Consulates General in the United States are located at 61 Broadway, New York, New York, 10006; 427 West Fifth Street, Los Angeles, California; and 611 Gravier Street, New Orleans, Louisiana.

Chilean consulates are located in Miami, Florida, and San Francisco, California. Honorary consuls are located in San Diego, California; Honolulu, Hawaii; Chicago, Illinois; Baltimore, Maryland; Boston, Massachusetts; Detroit, Michigan; White Bear Lake, Minnesota; Kansas City, Missouri; Ithaca, New York; Santurce, Puerto Rico; Dallas, Galveston, and Fort Worth, Texas; Seattle, Washington; and Milwaukee, Wisconsin.

Information on official U.S. Government representation in Chile is contained in Appendix A, Notes for Businessmen.

MOUNTAIN RAILROAD: High in the Andes is one of Chile's mountain railroads.



CHAPTER V

Marketing Aids

The U.S. Department of Commerce in Washington, D.C., and its 42 Field Offices in principal cities throughout the United States provide a wide range of activities, services, publications, and information to assist the U.S. businessman operating overseas. Valuable assistance is also available from other private and U.S. Government sources.

DEPARTMENT OF COMMERCE

Promotional Activities

Trade Missions. The Department of Commerce organizes or provides assistance for trade and investment missions to various countries, including Chile. Mission members meet with foreign business groups, private businessmen, and Government officials and present business proposals submitted by U.S. companies. United States firms may submit business proposals, usually up to 6 weeks before each mission's departure. The last official mission to visit Chile was in December 1961.

Industry-Organized Government-Approved trade missions (IOGA) usually concentrating on a much narrower range of products than the official mission—also receive the active support of the Department. Such missions usually survey the markets in more than one country within a region. Thus, an IOGA Poultry Industries Trade Mission visited Chile, Argentina, Brazil, and Peru during March 1966. For information on these activities, write to the nearest U.S. Department of Commerce Field Office or to the Department's Trade Missions Division, Bureau of International Commerce, Washington, D.C., 20230.

Trade Fairs. The Department organizes and participates in international trade fairs in foreign countries. It may either itself sponsor a solo exhibit or participate in one organized by the host country itself. The latter type fair could be the combined International Industrial and Agricultural Exposition, which is held annually near Los Cerrillos, Santiago's International Airport.

Mobile Trade Fairs, Inc. exhibits U.S. products by means of completely integrated containerized displays, which may be shipped by sea to one or more foreign countries. The display is exhibited in the port of arrival or may be easily shipped inland for display elsewhere. Such an exhibit was held in Vina del Mar (near the port of Valparaiso) and in Santiago in February 1966. Inquiries concerning trade fair activities should be directed to the nearest U.S. Department of Commerce Field Office or the Department's Commercial Exhibits Division, Bureau of International Commerce, Washington, D.C., 20230.

Sales Literature Displays. The commercial library of the American Embassy in Santiago has limited facilities for display of sample brochures but

CONCRETE DAM: Rapel hydroelectric plant dam wil serve the main industrial centers of Santiago and Valparaiso upon completion.

maintains a file of such material for use by Chilean businessmen who call or visit the library. For information on this service, write to the Department's Office of International Trade Promotion, Bureau of International Commerce, Washington, D.C., 20230, or contact one of the Department of Commerce Field Offices.

Direct Trade Aids

Inquiries concerning trade services are welcomed by the U.S. Department of Commerce field offices and by the Commercial Intelligence Division, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C., 20230. They can help an exporter get started in Chile or provide the existing exporting firm with the following services:

Trade Lists. Trade lists are available to U.S. firms wishing to find customers, agents, distributors, licensees, and sources of supply in Chile. Each list gives names and addresses of firms handling a specific commodity. The list also contains a summary of basic trade and industry data, including a brief analysis of foreign trade in the commodity covered, Government regulations affecting trade in the product, and other useful information. Lists of Chilean importers and dealers indicate relative size of each firm, method of operation, products handled, territory covered, and size of the sales force. Lists of Chilean exporters and manufacturers show relative size or production capacity of each firm and the products handled. Price: $1 for each commodity classification.

World Trade Directory Reports. World Trade Directory Reports carry basic commercial and financial information on specific Chilean firms and individuals. Data furnished on a given firm usually cover the type of organization, method of operation, lines handled, size of firm, sales territory, names of owners and officers, capital, sales volume, general reputation in trade and financial circles, and names of any U.S. firms represented by the foreign firm and serving as its supplier. They are prepared by the U.S. Foreign Service, and represent a consensus of reliable sources of information. They cost $2 per report. If information on a particular Chilean firm is not on file in Washington, D.C., it will be requested from the Foreign Service. To minimize delay, businessmen may authorize telegraphic request and reply, for which the U.S. Department of State will bill them directly.

Trade Contact Surveys. Trade contact surveys are specifically designed to locate agents, distributors, or licensees in Chile. They are made by the U.S. Foreign Service and are tailored to locating several firms which meet the specific requirements of the U.S. businessman as outlined in a business proposal. A survey is usually completed in 60 days, and includes pertinent marketing data in addition to names, addresses, and a brief description of the prospects for doing business. World Trade Directory Reports are supplied for each individual or firm recommended as a possible prospect. Completed applications for these surveys (forms obtainable from any of the Department's Field Offices or from the Department's Commercial Intelligence Division, Washington, D.C.), must be accompanied by sales literature and a $50 fee.

Agency Index. U.S. Foreign Service posts throughout the world keep an index with the names and addresses of foreign representatives of U.S. firms. By using the index maintained in Chile, a U.S. commercial officer there can promptly refer inquiries to the U.S. businessman's agents, distributors, or licensees in Chile. Special Agency Index cards are available for completion and distribution overseas, free on request.

Informational Services

The Department welcomes business inquiries about any aspect of the Chilean economy, import regulations, and other specific information relating to trade and investment in Chile. Questions should be directed to any Commerce Department Field Office, or to the American Republics Division, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C., 20230.

The Department's publications include:

International Commerce. A weekly magazine devoted to news about trade and investment abroad, International Commerce reports on general economic conditions in countries around the world and on changes in U.S. Government and foreign government regulations affecting trade and investment. Regular features are quarterly economic summaries describing key developments in the economies of the United States' trading partners, and periodic outlook articles by U.S. Commercial Attaches serving in foreign capitals and by the Department's country analysts. Each issue contains specific trade leads, scheduled arrival dates and U.S. addresses of foreign buyers and sellers, and schedules of commercial exhibitions in the United States and abroad. There are, in addition, reports prepared by the commodity specialists of the Department's Business and Defense Services Administration (BSDA). All of these draw heavily upon information gathered throughout the world by the U.S. Foreign Service. The subscription price is $16 a year; remittance is payable to the U.S. Superintendent of Documents. Subscriptions may be mailed to the Department's Field Offices or to the U.S. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

Checklist: Bureau of International Commerce International Business Publications. This checklist gives current reports in the Overseas Business Reports (formerly World Trade Information Service)

series, the special supplements to International Commerce (such as this survey), and other international business publications of the Department. Free. Order from the Sales and Distribution Section, U.S. Department of Commerce, Washington, D.C., 20230.

What You Should Know About Exporting. This is a how-to-get-started-in-exporting handbook. It gives full information on the Department's services to exporters as well as on private business aids to marketing abroad. It is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or from one of the Department's Field Offices. The price is 25 cents.

DEPARTMENT OF AGRICULTURE

Information on agricultural commodities, livestock, and agricultural development programs is available from the Foreign Agricultural Service and the Economic Research Service of the U.S. Department of Agriculture, Washington, D.C. The Department of Agriculture regularly publishes surveys on agricultural developments on both a worldwide, regional, and country basis. Its most recent publication devoted exclusively to Chile is entitled, Chile: Recent Trends in Agricultural Production and Trade (ERS-Foreign-84), May 1964.

DEPARTMENT OF INTERIOR

The U.S. Department of the Interior through its Bureau of Commercial Fisheries and Bureau of Mines maintains and develops information on foreign fishery and minerals developments. The Bureau of Mines publishes an annual *Minerals Yearbook* which provides a summary of the status of the mining industry in individual foreign countries. Reprints on individual countries, such as Chile, are available from the Bureau of Mines.

EXIMBANK

The credit facilities provided by the Foreign Credit Insurance Association (FCIA) and Eximbank in the insurance and guarantee field play an important role in support of U.S. sales abroad. These facilities are available for the sale of both goods and services and assist U.S. exporters in extending credit to their Chilean customers on terms competitive with those of other foreign suppliers.

The FCIA issues credit insurance for sales of goods on both short (up to 180 days) and medium (181 days to 5 years) terms. Such policies usually provide coverage for both commercial and political risks, but may be obtained for political risks alone. Commercial risks include insolvency and protracted default. Political-risk coverage protects against currency inconvertibility, cancellation or restriction of import or export licenses, expropriation or confiscation, and loss due to war, revolution, or civil disturbance. The Eximbank underwrites all or part of such policies.

The exporter may prefer instead to apply for an Eximbank medium-term (181 days to 5 years) credit guarantee. Such guarantees are extended by the Eximbank to commercial banks. The exporter thereby gains non-recourse financing from his bank, since the Eximbank assumes the credit risk on early maturity of notes. Such coverage may be obtained for goods shipped on a lease or consignment basis, for those exhibited at trade fairs, as well as for regular commercial exports. Services in the form of economic surveys, engineering design studies, and architectural studies are also eligible for guarantees.

Further information, including the FCIA booklet, *Guide to Export Credit Insurance for United States Businessmen*, may be obtained by writing to Foreign Credit Insurance Association, 250 Broadway, New York, N.Y., 10007, or to the Export-Import Bank of Washington, Washington, D.C., 20571.

AGENCY FOR INTERNATIONAL DEVELOPMENT

AID administers the U.S. foreign economic assistance program in Chile. Chile is one of the largest recipients of U.S. economic assistance. Most of that assistance currently is in the form of program loans to finance commercial imports by the private sector. In addition, AID provides development grants and technical assistance in support of the Chilean development program. AID's activities include the provision of investment guarantees and the financing of investment surveys. It also makes loans in local currency which are generated by the sale of surplus U.S. agricultural commodities (Cooley loans) under the Public Law 480, Food for Peace program.

More complete information on AID programs as they apply to foreign trade and investment are included in the publications, *Commercial Exports Under AID Programs*, prepared by the AID Office of Material Resources, and *Aids to Business (Overseas Investment)* prepared by the AID Office of Development Finance and Private Enterprise. Inquiries should be addressed to those Offices, Agency for International Development, U.S. Department of State, Washington, D.C., 20523.

INTER-AMERICAN DEVELOPMENT BANK

The IDB is a regional agency created by 20 American Hemisphere nations—19 Latin American countries and the United States—to accelerate the economic development of the member countries, individually and collectively. It is authorized to extend loans to governments of member countries, to any of their political subdivisions, or to private enterprises within member

FINANCIAL AID: An Inter-American Development Bank loan for $3.5 million helped finance construction of potable water facilities near Concepcion.

countries. The loans are used to finance development projects, including those which form part of a national or a regional program.

In its lending operations, the bank seeks to give priority to undertakings which, in its opinion, will make the most effective contribution to the economic growth of its member countries. It makes loans only for the acquisition or expansion of capital assets or, in some cases, for technical services. It does not extend loans for the purchase of established enterprises, refinancing operations, or working capital. For practical reasons, the bank only considers loan requests in excess of a certain minimum amount, which varies for the individual members. Credit needs below these set levels are met by the bank through development loans for relending, which it makes to development institutions in the member countries. Although it is also authorized to guarantee loans to foreign entities, the bank's current policy is not to make such guarantees.

For further information on IDB programs, write to Inter-American Development Bank, 808 17th Street, NW., Washington, D.C., 20577.

WORLD BANK

The IBRD, commonly known as the World Bank, finances a large number of development projects throughout the world. Most contracts for the provision of goods and services for these projects are open to competitive bidding by member countries and Switzerland. Information on procurement requirements is contained in the pamphlet, *Guidelines Relating to Procurement Under World Bank Loans and IDA Credits*, available from the International Bank for Reconstruction and Development, 1818 H Street, NW., Washington, D.C., 20433.

PRIVATE AIDS

Credit Information

Credit information on firms in Chile is available to the U.S. businessman from several private sources:

Credit Reporting Agency. A Dun & Bradstreet Company subsidiary provides coverage for Chile through its office located in Santiago. Inquiries from U.S. firms should be requested through the company's office at 99 Church Street, New York, New York, 10008 or through any of the company's branches in the United States.

Banks. Chilean banks prefer to receive credit inquiries from American firms through their correspondent banks in the United States or through the inquirer's bank. However, they may reply to direct inquiries, and in such cases a nominal charge is made. Ordinarily such banks make no charge for inquiries channeled through their correspondents' or the inquirer's bank.

Nearly all the major U.S. banks are represented by correspondent banks in Chile. The only subsidiary of a U.S. banking firm located there is the First National City Bank of New York which has branches located in Santiago, Valparaiso, and Concepcion. This bank also prepares reports on general economic conditions, the business and investment climate, the country's trading posture, and specific industries.

Other

The Chile-American Association, which maintains offices at 149 Broadway, New York, New York, has as its objective the promotion of business and cultural relations between Chile and the United States.

The National Foreign Trade Council at 10 Rockefeller Plaza, New York, New York, has a nationwide membership of companies engaged in foreign trade and other business operations abroad. It provides information and consultative services to members.

The Foreign Commerce Department of the Chamber of Commerce of the United States also provides many services to U.S. exporters. It is located at 1615 H Street, NW., Washington, D.C., 20006.

CHAPTER VI

Trade Regulations, Practices

Chile regulates the flow of imports into the country by means of a rather complex system of tariff, surcharge, deposit, exchange, and documentary regulations. These requirements and those with which the United States requires U.S. exporters to comply are summarized in this chapter. More complete information on this subject is contained in the Department's Bureau of International Commerce publication, *Foreign Trade Regulations of Chile* (Overseas Business Report 65-84, December 1965) which is periodically brought up to date and republished. Changes in Chilean and U.S. regulations are reported in the Department of Commerce weekly publication, INTERNATIONAL COMMERCE.

IMPORT TARIFF

The Chilean tariff consists of a basic duty (derechos basicos vigentes) and an additional ad valorem tax (impuestos ad valorem). The basic duty is generally expressed as a specific duty in terms of gold pesos per unit of weight (ordinarily the kilogram).

The gold peso, not a part of Chile's monetary system, is a constant standard for the expression of customs duties; it does not fluctuate with the value of the real currency, the escudo. One gold peso equals US$0.2061, or 4.852 gold pesos equal US$1. The additional taxes, applicable on most goods, are levied at rates of 3 percent, 30 percent, or 62 percent of the c.i.f. value, depending upon the degree of essentiality. The 62-percent category applies to most luxury-type imports, while the 30-percent category is the most common, applying to the widest range of goods.

Chile accords preferential duty treatment (derechos convenidos) for some imports under agreements concluded with foreign countries. Since both Chile and the United States are parties to the General Agreement on Tariffs and Trade (GATT), any concession which either extends to any member of the GATT is automatically extended to all other members. An exception is made of concessions granted by Chile on a growing list of commodities to other members of LAFTA. The items on which these concessions are granted are compiled either as Chile's National List or as part of the LAFTA common list. In addition to preferential duty treatment, these items are exempt from prior deposit and surcharge requirements.

PERMITTED AND PROHIBITED IMPORTS

The Chilean import system is based on a list of permitted and prohibited imports. Those goods not appearing on the permitted list are assumed to be prohibited. Although the list of permitted items is subject

STEEL PLANT: Blast furnaces and unloading tower of Cia. de Acero del Pacifico, Huachipato, Chile.

to frequent change, the following categories are generally permitted: drugs and pharmaceuticals, special steels, heavy equipment and machinery, agricultural machinery, paper and paperboard, and industrial electrical apparatus. Prohibited imports, except for a small group of absolutely prohibited items, may be brought into the so-called free ports. Such goods brought into the free ports must first be assembled or processed before their shipment to the rest of Chile.

IMPORT SURCHARGES

Chile imposes import surcharges in amounts up to 400 percent of the c.i.f. value, which amount is based upon the priority attached to the imported goods. While the amount so charged is usually referred to as the import surcharge, it actually is the sum of two surcharges: the impuesto adicional and the impuesto adicional agregado. These surcharges may be waived for goods authorized for importation on extended credit terms (cobertura diferida) and under special circumstances specified by Chilean legislation and the Central Bank. Thus, the Central Bank, on an individual basis, selects certain high priority imports financed by long-term U.S. economic assistance credits for exemption from the impuesto adicional agregado and prior deposit.

IMPORT REGISTRATION

Although no import license is required, import registration is required for all imports. Registration is effected by application to the Central Bank through an authorized commercial bank. Since January 15, 1965, import registration applications for one or more items during a particular month may be denied. Applications can be denied only when the total value of all applications for that calendar month exceeds the monthly average for the previous 12 months by more than 5 percent and when all other applications for the same import item during that calendar month are also rejected. However, a rejected application may be resubmitted in the next month.

Applications not rejected under this authority must be approved within 90 days of presentation. Import registration requests must declare the volume and value of imports of similar merchandise effected during the previous calendar year and during the current year. The Central Bank has discretionary authority to approve or reject registrations of goods to be financed on extended credit terms under its deferred coverage system.

On September 20, 1965, the Central Bank ruled that direct imports of spare parts, up to US$500 in value, can be made by end users themselves, i.e., not customary importers, without prior import deposit or applying for registration in advance. The registration and deposit can be made at any time within 30 days from the date of shipment.

IMPORT DEPOSIT

The prior import deposit, placed through a commercial bank, is necessary for all permitted imports and is generally equivalent to the surcharges on the same item, which range from 0.1 to 400 percent. However, some items call for prior deposits as high as 10,000 percent of the c.i.f. value. Deposits are returnable after 90 days. The Chilean customs authorities are authorized to clear goods not covered by an advance import deposit certificate up to a maximum value of $100, provided the goods are of a noncommercial value not requiring exchange cover and that the goods are included in the authorized list of imports.

In order to register an import, the Central Bank insists that, in addition to the above-mentioned conditions, the importer submit a proforma invoice issued by the supplier or its authorized agent. These regulations enable the Central Bank to verify that the price of the commodity being imported corresponds to its present price in the international market.

The deposit certificate received by the exporter is stamped by the Chilean Exchange Commission with the notation "Embarque Libre" (free shipment for vessels of any registry) or "Embarque en Nave Chilena" (shipment in Chilean vessels or on lines under special contract, such as Chilean-U.S. pooling arrangements).

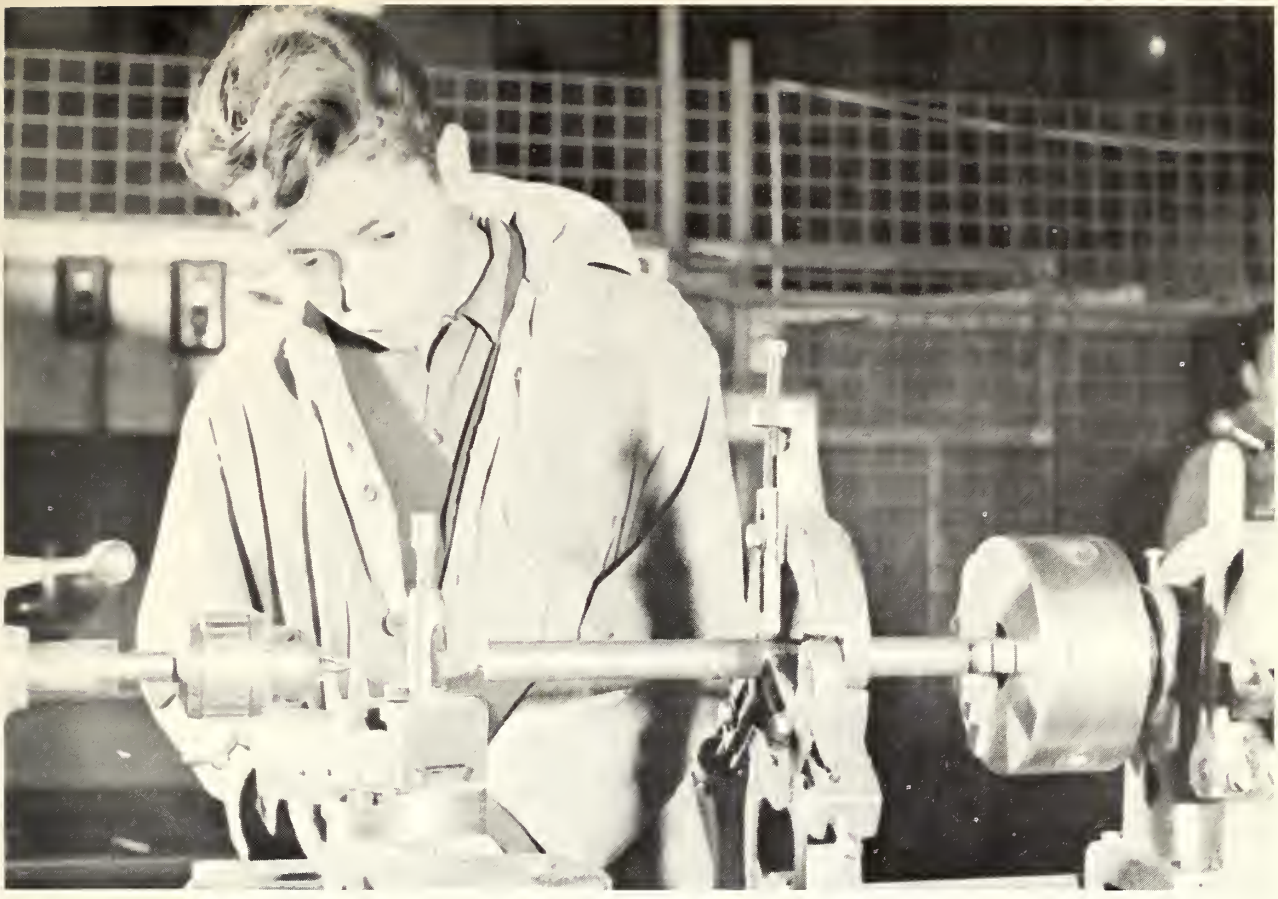
EXCHANGE CONTROLS

Foreign exchange for payment of imports, obtainable through the official bankers' market, is not made available until 80 days after the date of the bill of lading covering the shipment. For some time, most import transactions have been executed with exchange purchased in the bankers' futures market.

On August 12, 1965, the Central Bank announced that no more than 7 percent simple annual interest may be charged by foreign exporters for delays in receiving payments. Foreign exchange will only be granted for this amount, in addition to the c.i.f. value of the merchandise, as shown on the import coverage application.

FREE PORTS

The main free port in Chile established in 1953 is Arica at the northern tip of the country. Goods going into Arica generally undergo processing or assembly for shipment into the mainstream of the



CHILEAN EDUCATION: Students are trained in trade schools to operate industrial and mining machinery.

Chilean economy. Most goods on the prohibited list may be shipped into Arica upon payment of regular duties plus 200 percent of the c.i.f. value, and those on the permitted list may be imported into Arica free of prior deposits, although they too must pay the regular basic duty and additional tax.

The customs surcharge for permitted goods brought into Arica is 25 percent rather than the normal rate indicated on the permitted list. Certain goods imported into Arica, however, are exempt from all customs duties and charges. This group includes foodstuffs, construction materials, most machinery, trucks, fuel, automobile parts, raw materials, and those commodities used in mining or agriculture or in the establishment or operation of regular industry.

No goods obtaining these special exemptions may be shipped to the rest of Chile unless they have been first processed or assembled, in which case they are subject to charges that vary with the types of goods. The charge is either 50 percent or 75 percent of the normal customs duty (although no surcharge is levied) or is equivalent to full normal customs charges. Under Law 13,039 that established the free port, a few industries in Arica may ship to the rest of Chile duty-free.

Magallanes, Aysen, and Chiloe (provinces to the far south) were granted many free port privileges in 1956 although quota restrictions were in effect. In 1956 the Departments of Pisagua, Iquique, Taltal, and Chanaral were granted special import and export privileges. There, equipment necessary for mining and related operations may be imported free of restrictions.

All imports into free ports are now transacted at the official bankers' exchange rate.

SALES AND OTHER INTERNAL TAXES

The general sales tax is 6 percent and applies on most goods. However, luxuries and special commodities are subject to varying sales taxes which are somewhat higher. Special taxes are applied in free port zones from time to time.

DOCUMENTATION AND FEES

As the Chilean consulate is no longer required to visa documents prior to shipment, exporters will not pay consular fees. They will be paid, however, by the importer in Chile.

A commercial invoice is required on all freight, air cargo, or parcel post shipments to Chile. Copies of the commercial invoice must be prepared in quadruplicate in Spanish or English.

The invoice must show clearly f.o.b. or f.a.s. steamer value in the extreme right-hand margin. C.i.f. value (itemized as to cost, insurance, and freight) must also be shown and must appear under and to the left of the f.o.b. or f.a.s. value. Unit price of each item must be shown. The import deposit certificate number covering the shipment must also be indicated on the invoice.

Commercial invoices must contain the following declaration signed by the shipper, in English or Spanish:

> "Under oath we declare that we are the owners (or shippers) of the above mentioned merchandise, that the prices and other details are exact, that the said merchandise is a product of the soil or industry of (country of origin) and that we accept the legal consequence which might arise through any inexactitude contained in this account."

When the bill of lading includes goods covered by more than one commercial invoice, a summary invoice should be used. It should contain the oath as given above and identify each item with reference to the corresponding invoice.

The bill of lading (original and one copy required) must show total weights in metric units and total freight charges. If covering more than one item, individual weights in the metric scale must be shown. The import deposit certificate number must also be indicated.

"To order" shipments are recognized in Chile provided the name of the consignee is shown in parentheses.

The following information should be shown on the bill of lading: The name of the ship, the exporter, and the consignee; the kind, quantity, marks, and number of the packages; ports of shipment and of destination; and the amount of freight and insurance.

Corrections, additions, or erasures are not permitted in the bill of lading, but if an error is discovered it may be rectified by a letter of correction. It is advisable that problems of this kind be handled by a customs broker in Chile.

An AID supplier's certificate (an original and four copies), signed by the supplier, must accompany all shipments of merchandise from the United States to Chile, whether AID-financed or not.

LABELING AND MARKING REQUIREMENTS

All imported products of a kind ordinarily consumed by the public must be marked or labeled with an indication of the country of origin before they may be placed on sale in Chile. Packaged goods, except those subject to the payment of stamp taxes, such as cigarettes, playing cards, and toilet preparations, must be marked to show the quality, purity, or mixture and the net weight or measure of the contents.

Shipping cases must be stenciled (marking with a brush is not permitted) to show shipping marks and numbers and the gross weight in kilograms. The total gross weight of iron or steel bars, plates, pipes, and rails need not be given on individual pieces. However, the gross weight in kilograms must be indicated on each bundle of structural steel, coil or wire, and the like.

Net weight is defined as the actual weight of the merchandise without wrapping or container. Legal weight is defined as including the weight of goods together with that of the immediate container and wrappings but excluding the crate, box, or other exterior container and shavings, straw, or other material used for packing the goods therein. The legal weight of such goods as powders, liquids, or granules imported loose in barrrels or other large containers includes the weight of such containers. Gross weight is defined as including the weight of the merchandise and all containers, wrappers, and packing used in preparing the goods for shipment. A tolerance of 5 percent of the c.i.f. value (but not to exceed $1,000) is allowed if the merchandise is assessed according to volume or weight.

SAMPLES AND ADVERTISING MATTER

Samples obviously of no commercial value are dutiable at 0.03 gold peso (1 gold peso equals $0.2061) per kilogram of gross weight. If the samples have commercial value, duty is levied at the rate applying to commercial shipments of similar articles. Samples which otherwise would be subject to regular import duties will be admitted at the nominal rate of 0.03 gold peso per kilogram if mutilated so as to be unsalable.

Dutiable samples may be admitted into Chile under bond or deposit of the full amount of the duty payable for a period fixed by the Superintendency of Customs. The goods must be declared, for customs purposes, on forms provided for that purpose and must be described in sufficient detail to enable the customs inspector to identify them at the time of both their entry and reexportation.

Reexportation of samples is effected by an application, in triplicate, listing the articles to be withdrawn. A copy of the declaration submitted at the time the goods were imported must be attached to the application. If the samples are reexported within the prescribed time limit or its extension, the amount deposited will be refunded or the bond canceled. If only a part of the samples should be withdrawn, the amount of import duty applicable to those sold or otherwise disposed of within the country will be collected.

Samples carried in traveler's baggage are treated in the same manner as those sent by freight. Advertising matter is dutiable, but single catalogs are free.

U.S. EXPORT CONTROLS

All exports from the United States or its possessions to Chile are subject to the rules and regulations of the Office of Export Control, Bureau of International Commerce, U.S. Department of Commerce, except exports of arms, ammunition, and implements of war, which are licensed by the U.S. Department of State; gold (except fabricated gold with a gold content value of 90 percent or less) and narcotics, licensed by the U.S. Department of the Treasury; tobacco plants and seeds, licensed by the U.S. Department of Agriculture; vessels, licensed by the U.S. Maritime Administration; natural gas and electric energy, licensed by the U.S. Federal Power Commission; and certain source material and facilities for the production of fissionable material, licensed by the U.S. Atomic Energy Commission.

The regulations concerning export control are set forth in the *Comprehensive Export Schedule,* which is available for examination at the U.S. Department of Commerce or at any of its Field Offices. The *Comprehensive Export Schedule* and supplementary *Current Export Bulletin* may be purchased from any U.S. Department of Commerce Field Office or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, at an annual subscription rate of $7 ($2 additional for foreign mailing). The subscription year begins each April 1. Airmail service on the supplementary bulletins is available, to domestic subscribers only, at an additional cost of $4 a year.

A shipper's export declaration must be filed with the Collector of Customs for shipments requiring a validated export license and for most shipments under a general license. Information regarding the declaration may be obtained from the Foreign Trade Division, Bureau of the Census, U.S. Department of Commerce, Washington, D.C., 20233.

A destination control statement is necessary on shipping documents for all shipments requiring a validated export license and most shipments made under a general license. Thus, the statement applies to virtually all commercial shipments from the United States. The major exceptions to the requirement for an appropriate statement are shipments intended for consumption in Canada (other than beet and cane sugar); shipments transiting the United States which do not require a validated export license; and shipments of certain publications and unclassified technical data.

Additional information concerning export control requirements for shipments to Chile may be obtained direct from the Office of Export Control, Bureau of International Commerce, Department of Commerce, Washington, D.C., 20230, or from any of the Department's Field Offices.

OTHER CONTROLS

The U.S. Treasury Department, Division of Foreign Assets Control, Washington, D.C., 20220, should be consulted for information on the foreign assets control regulations, which prohibit all unlicensed transactions directly or indirectly involving mainland Chinese or North Korean financing or trade. These regulations, among other things, specifically prohibit the unlicensed purchase in any foreign country of all goods of mainland Chinese origin and all goods of types which in the past were chiefly imported into the United States from mainland China.

The Division of Foreign Assets Control should also be consulted with respect to the transactions control regulations, which prohibit Americans from shipping strategic materials from any foreign country to a Soviet-bloc country.

Appendixes

APPENDIX A. NOTES TO BUSINESSMEN

Passports and Visas

A business traveler or tourist usually needs only present his passport and a valid smallpox vaccination certificate for authorization to enter Chile. The authorization is good for 90 days. Inquiries concerning entry into Chile should be directed to one of the Chilean consular offices located in the United States (see chapter IV). Information concerning the issuance of passports may be obtained from the U.S. Department of State, Washington, D.C., 20524; from Department of State passport offices in Boston, New York, Chicago, New Orleans, Los Angeles, and San Francisco; or from the clerk of a Federal District Court and some state courts.

Travel

There are no restrictions on the movements of business travelers in Chile. Chileans are basically a friendly, tolerant, hospitable people, and U.S. citizens need have no qualms about traveling anywhere they wish.

International airports are located in Santiago and Antofogasta. Santiago is served by 14 international airlines, with a total of about 50 arrivals and departures every week. Panagra is the only U.S. airline operating in Chile, with five round-trip jet flights to the United States a week. Travel time to New York from Santiago is about 14 hours; to Miami, 11 hours; and to Buenos Aires, 1½ hours.

LAN operates Caravelle jet flights to Miami as well as jet and DC-6B service throughout Chile, weather permitting. Check-in should be completed an hour ahead of scheduled departure on domestic flights, particularly in winter and in the south where impending bad weather may necessitate a departure earlier than scheduled. LAN has an excellent safety record, its equipment is good, and its pilots are well trained. Fares are not expensive.

Chile's chief industrial, economic, and tourist centers are linked by an extensive rail network which is undergoing modernization. Five international railways link Chile with its neighbors. Chilean trains are equipped with good quality coaches, sleepers, and dining cars with excellent accommodations and service. Fares are reasonable.

Urban transportation facilities are severely strained after years of import restrictions. Taxis are numerous, but often hard to obtain; they are equipped with meters. Fares are inexpensive, with a 50-percent surcharge after 11:00 P.M. and on holidays, and drivers do not expect tips except for extra services or for long trips on a flat-rate. Buses are cheap but crowded during rush hours.

There is good and frequent interurban bus service between Santiago and most of the larger cities and coastal resorts of the country. These buses are modern, comfortable, and in good condition. The Pan-American Highway provides hard surface travel the length of most of the country.

Cars may be rented for the equivalent of about $8 to $23 a day, plus 8 to 12 cents a kilometer (0.625 miles). The acquisition of an international driver's license in the States will save time since application for a Chilean license takes a few days.

Passenger ships of the Grace Line and the Gulf and South America Steam Ship Company call at

RIO LAJA FALLS: Chile has fresh water streams as well as one of the driest deserts in the world, the Atacama.

Chilean ports. Sailing time between Valparaiso and New York is about 3 weeks. Many European and South American lines call at Chilean ports.

Currency Regulations and Banks

The official currency unit of Chile is the escudo (written E°) which superseded the peso in 1960. The escudo is divided into units of 100 centesimos. However, peso currency (1,000 pesos = 1 escudo) still circulates, and taxi drivers and waiters often quote prices in pesos instead of escudos. In past years, the escudo has been devalued periodically; therefore, it is not prudent to exchange all one's money at one time if a long stay is contemplated. Money may be legally exchanged only at banks and officially designated hotels at the official broker's rate. Traveler's checks are acceptable at most banks and hotels. It is illegal for travelers to take Chilean currency out of the country. There are no prohibitions against bringing Chilean currency into Chile, although the bringing in of large amounts would necessitate an explanation.

There are more than 25 banks in Santiago. The First National City Bank of New York is the only U.S. bank which maintains offices in Chile, including branches in Santiago, Valparaiso, and Concepcion. There are other foreign banks. Public banking hours are now 9:00 a.m. to 2:00 p.m.

Hotel Accommodations and Restaurants

There are several well-equipped hotels and apartment-hotels centrally located in Santiago, including one of the Hilton chain. Very comfortable accommodations can be obtained for the equivalent of no more than $10 per day. There are also first-class accommodations in Chile's other cities, particularly near tourist attractions, but it is often wise to make reservations ahead, if possible.

There are many fine restaurants in Chile, including those run by the larger hotels. Chicken dishes are probably Chile's most famous, although there are many others. Chilean wines are excellent and inexpensive, as is food in general, compared with those in the United States.

All hotel and restaurant bills include a service charge, but moderate additional tipping is customary.

Business Hours

Chile began, in early 1966, the changeover to the straight time shift (jornada unica) in the cities of Santiago, Valparaiso, Vina del Mar, Concepcion, Talcahuano, Tome, Penco, Lota, Chiguayante, and Coronel. The plan to have business and Government operating on a straight 8-hour day by July 1, 1966, has been only partly carried out. However, the workday generally begins at the following times:

Private offices and companies	8:15 to 8:45 a.m., weekly
Government offices	8:30 to 9:00 a.m., weekly
Factories and industries	6:30 to 8:00 a.m., weekly
Banks and financial institutions	9:30 to 10:30 a.m., weekly
Banks (public hours)	9:00 a.m. open, 2:00 p.m. close

The workday may be extended beyond 8 hours by the amount of time an individual establishment may increase the official 30-minute lunch period, which ordinarily begins at 12 noon. Business lunches still tend to run 2 hours or more. A number of business firms, such as importers, exporters, wholesalers, and factories, open on Saturday mornings and operate until noon or a little later. Similarly, retail stores in Santiago and Valparaiso stay open Saturday morning. Retail stores in other cities also have afternoon hours on Saturday.

The smaller cities and towns (which are not mentioned above) will eventually change to the new system but continue to operate on the following schedule for the time being:

Office:

Morning, 9/9:30 to 12:30/1:00
Afternoon, 2:30/3:00 to 6:30/7:00

Stores:

Morning, 9:30 to 1:00
Afternoon, 4:00 to 8:00

Holidays and Vacation Periods

There are 15 national and religious holidays on which business establishments are closed:

January	1—New Year's Day
	—Good Friday
	—Holy Saturday
May	1—May Day
May	7—Corpus Christi
May	21—Battle of Iquique
	—Ascension Day
June	29—Sts. Peter and Paul
August	15—Assumption Day
September	18-19—Independence Day
October	12—Columbus Day
November	1—All Saints' Day
December	8—Immaculate Conception
December	25—Christmas Day

January and February are the favorite vacation months for Chilean businessmen. Those months are the height of the Chilean summer. Appointments may also be difficult to obtain during the weeks in which Christmas, New Year's, Easter, and Independence Day fall.

Communications

International telephone service, much of it by radiotelephone, is satisfactory, depending upon atmospheric conditions. Rates to the United States are the equivalent of $10 for the first 3 minutes and $3 for each additional minute plus a 15-percent tax. Reduced rates are in effect on Sundays. There is domestic telephone service to all parts of Chile, although delays may be experienced in making connections.

Telegraph service to the United States is good. The day rate is the equivalent of $0.50 per word. The night rate is under $6 per 22-word minimum, with each additional word costing $0.25. A 15-percent tax is added to these charges. The Chilean State Railways operates an extensive domestic telegraph service.

Business correspondence goes by airmail because of the slowness of surface transport. Delivery time is 3 to 5 days (New York to Santiago). Air mail postage from Santiago to the United States is the equivalent of $0.08 per 5 grams (0.035 of an ounce).

Clothing

The climate in Santiago calls for about the same type of clothing that would be worn in San Francisco, California. Because of the frequently inadequate heating in winter, one will find heavier indoor clothing and sweaters welcome. Rainwear is a necessity during the winter; umbrellas are expensive in Chile.

Chilean men dress conservatively, with dark suits the rule for dress wear and for most evening occasions. A lightweight dark suit may be desirable in summer (December to March), but may not be warm enough for some persons in the late afternoon and evening. Light colored suits are neither popular nor practical because of the difficulty, time, and expense in obtaining satisfactory dry cleaning. A topcoat and raincoat are more serviceable than a heavy overcoat.

Hats are not worn as frequently in Chile as in the United States. White shirts are the rule, and name-brand readymade shirts, ties, underwear, socks, and pajamas are manufactured locally. Shoes are available, but choice of lasts is limited; most shoes are made in only one width for each length. Large sizes are difficult to obtain. Formal wear may not be needed. The black dinner jacket is used throughout the year, although the white jacket is acceptable in summer.

Chilean women are noted for being well dressed and well groomed and generally dress more formally than women in the United States. One should count on dressing warmly, particularly from April through October. Suits are particularly practical for business wear, heavyweight wool for winter, lightweight for between seasons. Linen, cotton, and synthetic fabrics are worn in summer. Suits with contrasting blouses, dress and jacket combinations, or sleeveless dresses are worn for street and office. A light wrap or matching sweater and stole will be welcome after sundown. Chilean women almost never wear hats, but wear the traditional mantillas for church services and other solemn occasions. Shoes, underwear, sleepwear, and stockings are available locally at reasonable prices. Short silk or wool cocktail dresses are suitable for more formal dinners and cocktail parties, while full-length evening gowns are almost never worn.

Health and Medicine

The general level of community health is quite high in Santiago as compared with most other large Latin American cities. There is an efficient sewage and garbage disposal system; the streets are cleaned regularly, and there is no serious vermin control problem. Water, in Santiago, is purified and safe for drinking most of the time, although some residents prefer to boil drinking water. Foods and beverages are generally perfectly safe, although discretion should be exercised in the selection of restaurants. If there is reason for doubt, fresh vegetables (particularly of the leafy variety) and raw fruit with skin attached should be avoided because of the possibility of insufficient washing. Milk is pasteurized, but usually boiled before using because of the frequent absence of refrigerated distribution facilities.

Outside of the larger cities, water should be regarded as contaminated, and food (particularly uncooked food) selected with caution.

Respiratory ailments are a problem to some residents because of the deceptively mild climate, sharp changes between day and night temperatures, drafty or poorly heated buildings, and smog. However, the one disorder that a short-time visitor might encounter is an intestinal upset (indigestion and diarrhea). The average person will probably encounter no serious health problems if he uses common sense in his living pattern.

Smallpox, typhoid, and polio immunizations are recommended for all travelers to Chile, and typhus for anyone traveling extensively through the country. Anyone contemplating a more lengthy stay might wish to have the added protection against hepatitis which gamma globulin injections provide.

There are several modern, well-equipped hospitals in Santiago, and a body of well-trained medical and dental personnel, many of whom speak English. Other than the most exceptional cases, nearly any disease or disorder can be competently treated in Chile. Satisfactory prescription eyeglasses, including bifocals, can be obtained also. There are many pharmacies, including all-night shops, with a broad range of high-

quality stock. Only the most specialized prescriptions need be brought with the traveler.

Electric Current and Weights and Measures

Electric current is 220 volts, 50 cycles, single-phase, two-wire. Transformers must be used with 110-volt appliances, such as razors, and are available in hotels. Appliances with 50-60 cycle motors are operable without conversion, but 60-cycle electric clocks obviously are of no use.

Chile employs the metric system of weights and measures:
1 meter = 39.37 inches
1 kilometer = 0.62 miles
1 kilogram = 2.20 pounds
1 liter = 1.06 liquid quarts
1 liter = 0.26 U.S. gallons
1 inch = 2.54 centimeters
1 mile = 1.61 kilometers
1 pound = 0.45 kilograms
1 liquid quart = 0.95 liters
1 U.S. gallon = 3.79 liters

U.S. Representation

The American Embassy is located on the seventh through ninth floors of the Codina Building at Agustina 1343 in downtown Santiago on the edge of the Plaza de la Constitucion. All Embassy sections except for the Economic and Commercial, Consular and Agriculture sections are located there.

The office of the Commercial Attache and the commercial library are now located on the second floor of a commercial building at Alameda Bernardo O'Higgins 1146, four blocks from the Embassy. AID has its offices on the second and seventh through tenth floors of the same building. The Consular Section and the office of the Agricultural Attache are located in the Chancery Annex at Merced 250 facing the Parque Forestal about 13 blocks from the Embassy.

The Embassy and Chancery Annex hours are 9:00 to 1:00 and 2:15 to 6:15, weekly. They may be reached by telephone on numbers 82801 through 82809. Office hours for the Economic and Commercial section and AID are 9:00 to 12:30 and 1:30 to 6:00, weekly. Their telephone numbers are 82641 through 82645.

The only other Foreign Service post in Chile is the consulate in Antofagasta. There are consular agencies in Valparaiso and Concepcion.

The United States Information Agency-USIA, Peace Corps, National Aeronautics and Space Administration-NASA, Inter-American Geodetic Survey, and Department of Defense are also represented in Chile.

APPENDIX B. ECONOMIC REGIONS

North

The North extends from the Peruvian border to approximately latitude 27° S. This region comprises the Provinces of Tarapaca and Antofagasta. It is almost entirely dependent on mining for its livelihood. This region accounts for all the Chilean output of nitrate, iodine, and sulfur and for about 60 percent of the copper. In recent years, fishing has expanded greatly and there has been a moderate increase in individual activity. Agriculture adds little to the economy. Almost all foodstuffs must be imported from central and southern Chile or from abroad.

Antofagasta.—With an estimated population of 89,114 at the end of 1960, Antofagasta is the eighth largest city in Chile and the most important commercial center in the North. It lies 222 nautical miles south of Iquique and 571 nautical miles north of Valparaiso. Transportation facilities are excellent and include rail links with Bolivia, Salta in Argentina, and all points south of Iquique. Chile also has an international airport. There are good road connections with the Maria Elena and Pedro de Valdivia nitrate plants, as well as with the Chuquicamata copper mine and the explosives plant in Calama. Imports and exports of large copper and nitrate companies located in this area are made through Antofagasta as well as through the smaller port of Tocopilla. Industries include a brewery, two fish canneries, a sulfuric acid plant, a gas plant, several foundries, and establishments producing spaghetti, oxygen, soap, and candles.

Calama.—With a population of 56,330 in 1960, Calama ranks as the second largest city in the North. It is located about 90 miles inland from the port of Tocopilla and about 7 miles from Anaconda Mining Company's Chuquicamata copper mine—the world's largest copper mine.

Iquique.—Situated 108 nautical miles south of Arica, with a population of 51,468 in 1960, Iquique is the third largest city in the North. It is the focal point for the recently expanded fishmeal and fish oil activities of the North. It has several fish canneries, including the largest cannery in Chile. It is the regional headquarters for the Cia. Salitrera de Tarapaca

y Antofagasta, the second largest nitrate producer whose mechanical nitrate plant at Victoria can be reached by road from Iquique. There are still a few Shanks plants in operation in this area. Iquique is also the northern headquarters for the guano industry. It has a large whaling station; a gas plant; and establishments producing mixed fertilizers, sodium and potassium silicates, salt, lime, and mineral waters.

Arica.—Located just south of the Peruvian border and 885 nautical miles north of Valparaiso, Arica had a population of 46,294 in 1960. To benefit from the tax and other incentives offered by the free port law, a number of industries have been established in Arica. These include assembly plants for automobiles and small trucks, motorbikes, storage batteries, and other automotive parts such as brake linings, radios and television sets, textiles, toys, aluminum window castings, carbon paper, typewriter ribbons, and fishmeal. The future status of industry in Arica is uncertain because of the continuing curtailment of free-port privileges and growing interest in locating manufacturing activities closer to major production and consumption centers. The city is also the terminus of the Arica-La Paz Railway and imports in transit to Bolivia enter here.

North Central

The North Central, with a population of 471,781 in 1963, was once the world's most important copper producing area and a leading producer of silver as well. This region includes the provinces of Atacama and Coquimbo. The rich ores which supported those activities have long since been exhausted although the small- and medium-sized enterprises which are active everywhere throughout the area still provide between 5 and 7 percent of the country's copper output and a substantial percentage of the mine and placer gold. The region also accounts for all of the iron ore, manganese, mercury, and apatite production of Chile. Agriculture in this region becomes progressively more important from north to south until finally, in southern Coquimbo, it is the mainstay of the economy. Many near-tropical products are raised in its fertile river valleys. The raisins of Huasco and the pisco from Elqui are famous throughout the country. Manufacturing is of little importance in north central Chile. Excellent food fish are caught along the coast, but the fishing industry is not well developed.

The cities of Coquimbo and La Serena, together with the port of Guayacan, formed a metropolitan area of some 100,000 inhabitants in 1960. This area is the principal commercial nucleus of the region, but such towns as Ovalle (46,553), Copiapo (37,224), Vallenar (30,793), and Chanaral (26,997) are of commercial significance. Coquimbo lies 200 nautical miles north of Valparaiso and is a port of entry for imports for the area between Copiapo and Ovalle. Guayacan and Chanaral are important mineral exporting ports.

La Serena (population 55,708) lies less than 8 miles to the northeast. Offices of the Bethlehem-Chile Iron Mines Co. are located here. The El Tofo mine lies about 45 miles to the north and the El Romeral mine about 15 miles to the north. A large cement plant, a ferromanganese plant, and several smaller industries are located in the neighborhood.

Central

With its population in excess of 5 million, the Central is the heartland of Chile. About 65 percent of all imports are destined to this region. It comprises the Provinces of Aconcagua, Valparaiso, Santiago, O'Higgins, Colchagua, Curico, Talca, Maule, Linares, and Nuble. It includes the Aconcagua Valley and the Central Valley as far south as the Bio-Bio River. These valleys form one of the richest agricultural areas in South America. Central Chile accounts for over one-third of the mining output, over one-half of the agricultural production, and three-fourths of the value of manufactures of the entire country. It has an invigorating climate and the best transportation and communications facilities in Chile.

Its population is concentrated in the Provinces of Santiago and Valparaiso which together had an estimated population of 3.4 million in 1963, at least four-fifths of which may be classified as urban. These two Provinces account for a little more than two-fifths of the country's total population. They also account for over two-thirds of the total value of manufacturing output and over half of the value of all imports consumed.

Greater Santiago.—With an estimated population in excess of 2.4 million in January 1966, Greater Santiago is Chile's principal city. It lies at the foot of the massive, snow-covered central Andes at the northern end of the Central Valley at an altitude of 1,706 feet. It is 116 miles by rail from Valparaiso, 1,238 miles from Iquique, and 671 miles from Puerto Montt. Its Los Cerillos Airport is 5,122 air-miles from New York and 7,239 air-miles from Paris. A new international airport, to replace Los Cerillos, for jet traffic is under construction at Pudahuel and is expected to be in operation by December 1966.

Santiago is the headquarters for most of the major mining, industrial, distributing, banking, and commercial enterprises. It is the principal medical center of Chile and the seat of the country's two largest universities. Living conditions are healthful, and the city can provide virtually all the conveniences of modern living.

SANTIAGO STOCKYARDS: A huaso (Chilean cowboy) does the same job as his counterpart in Colorado does when selecting cattle for sale.

Valparaiso and Vina del Mar.—The twin cities of Valparaiso and Vina del Mar form one of the handsomest metropolitan areas in Latin America. The combined population of the two cities was close to 400,000 in 1960 and many thousands more live in the lovely towns on the railway to the east, served by articulated electric suburban trains. In summer the population is further swelled by the thousands who flock from the warm interior to spend their vacations or the entire season in Vina del Mar or at one of the resorts which line the coast from Papudo in the north to Cartagena in the south.

Valparaiso (population 259,241 in 1960) is the principal port of Chile. It is 4,638 nautical miles from New York, 2,622 nautical miles from Balboa, Panama, and 1,438 nautical miles from Punta Arenas, on the southern end of Chile, via the outside passage. It is Chile's second most important industrial and commercial center, although Concepcion is growing rapidly and may eventually surpass it. CORFO is considering the development of an industrial park in Valparaiso.

Vina del Mar (population 126,441 in 1960) is usually described as the principal summer resort of the Pacific coast of South America. The city is also the site of numerous industrial plants, including the largest sugar refineries, soap factories, and vegetable-oil mills in Chile. The Concon petroleum refinery is situated just north of Vina del Mar. It already provides raw materials for the manufacture of some chemical products, and is expected to play a primary role in the development of a petrochemical industry.

Other cities.—The Central Region has a large number of other towns and cities of some significance. These include Chillan (82,947), Talca (80,277), Rancagua (61,830), Curico (51,721), Linares (51,480), Quillota (41,910), and Quilpue (40,902).

South Central

The South Central, with a 1960 population of 1,361,434, comprises the Provinces of Concepcion,

Arauco, Bio-Bio, Malleco, and Cautin, and accounts for 18 percent of the population of Chile. While it covers only 7.3 percent of the country's total area, it has 33.1 percent of Chile's arable land. It accounts for about one-third of both the cattle population and cereal output, and for a major share of lumber output and the fish catch. It is one of the most rapidly growing industrial areas of Chile, the center for steel production, the major pulp and paper producer, and the site of a petroleum refinery at Concepcion which is to be completed in 1966. The refinery will be the principal supplier of raw materials for a major petrochemical complex to be located there.

The industrial complex of south central Chile is concentrated mainly on the coast from Tome in the north to Lota in the south, a distance of some 45 miles. Included in this area are Concepcion-Talcahuano (primary and secondary iron and steel products); Tome (woolens); Lirquen (flat and plate glass); Penco (sugar refining, fertilizers, chinaware, sanitary fixtures); Chiguayante (textiles); Coronel (coal mines); and Lota (coal mines and refractories).

Concepcion.—With an estimated 1960 population of 167,468, Concepcion is the third largest city in Chile. It shows the rising tempo of its economic life and may eventually challenge Valparaiso for the title of Chile's second most important city.

Talcahuano.—With a population of 99,231 in 1960, Talcahuano lies approximately 10 miles to the northwest of Concepcion although the intervening areas have been largely occupied by residential and industrial districts. Talcahuano, the port for Concepcion, is the most important port in southern Chile. It lies 239 nautical miles south of Valparaiso and 363 miles southwest of Santiago by rail. Contiguous to Talcahuano but on San Vicente Bay is the Huachipato industrial district with its steel mill and ferroalloy, carbide, lime, and wire products works. A major port is scheduled for construction on the bay.

Other cities.—Other cities of significance in the South Central Region include Temuco (111,641), Los Angeles (75,639), Coronel (60,234), Lota (51,679), Tome (41,121), and Angol (32,816). Temuco is an important lumber, agricultural, and livestock center with flour mills, tanneries, and a number of other important industries. Los Angeles is the center of an important beet sugar industry. Tome is noted as a woolen textile center, and Coronel and Lota are the sites of the coal industry.

Lake Region

The Lake Region, with a population of 634,041 in 1963, comprises the provinces of Valdivia, Osorno, and Llanquihue.

This region supplies about a quarter of the cereal and potato production and over half of the lumber production of Chile. It has one-fourth of the cattle population and ranks second in hog and fourth in sheep raising. It is an important dairy area and produces most of the Chilean apple crop. Industry provides only minor support to the economy except in areas such as Valdivia and Osorno.

Osorno.—With a population of 93,686 in 1960, Osorno is an important tourist center and an overnight stop on the southernmost lake route from Santiago to Buenos Aires. Commercially, Osorno has importance as a local distributing center and it also has a number of important industries, including one of the largest dry milk plants in Latin America, one of the largest butter plants in Chile, a modern packing plant shipping chilled beef to the north, important flour mills, foundries.

Valdivia.—With an estimated population of 69,904 in 1960, Valdivia ranks as Chile's sixth largest city. Located on the Calle-Calle River 9 miles from its mouth and 11 miles from its port at Corral, Valdivia is 536 miles south of Santiago by rail. The city is the fourth most important industrial center in the Republic. The output of its major industries includes shoes, leather, freight cars, tugs and lighters, beer, paper, refined sugar, liquors, flour, and wood products. The wood products include veneers, treated lumber, sash and doors. Valdivia also produces leather belting, ceramics, nails, crackers, and alimentary pastes.

Other cities.—Other locally important centers include Puerto Montt (64,775) which supplies over half of the shellfish consumption in Chile, Panguipulli (34,482), La Union (28,780), and Rio Bueno (26,743).

Austral Region

The Austral had a population estimated at 233,396 in 1963; it comprises the Provinces of Chiloe, Aysen, and Magallanes. It in reality contains three quite distinct and entirely independent economic sections. The northernmost area includes the island of Chiloe and the islands in the Gulf of Corcovado. The mainland portion of the Province of Chiloe is largely uninhabited. The central area is composed of the Aysen and Coihaique Valleys and the transandean lands as far south as Chile Chico. The southernmost area includes all of the Province of Magallanes. A few isolated instances of economic activity are found elsewhere, such as the limestone quarries of the Huachipato steel mill on Guarello Island and some lumbering on the mainland opposite the island of Chiloe.

The island of Chiloe is separated from the mainland by the Straits of Chacao. A ferry service between

PETROLEUM PIPELINE: Propane and butane pipelines head north from Port Percy, Tierra del Fuego Is'and, Magallanes, Chile, to central Chile. Liquid petroleum gas is stored here in this part of the facilities of the Empresa Nacional del Petroleo.

the island and the mainland was inaugurated in 1964. The island has an area of approximately 3,224 square miles. Its principal towns are Ancud (population 18,207 in 1960) and Castro (18,262). They are connected by a railway and a highway. The western part of the island is heavily timbered. The Chilotes, as its inhabitants are called, do some lumbering and fishing and raise large amounts of potatoes and small crops of cereals. Many of them enter the merchant marine, while hundreds journey each year to Magallanes for the wool clip.

The Aysen-Coihaique area has been opened up only since 1929. It has grown slowly but steadily over the years. Aysen (population 10,662 in 1960) and Coihaique (16,217) are supported by the sheep and cattle industry, which form the basis for the economy of the area. There is also some copper, lead, and zinc mining in the neighborhood of the Lago de Buenos Aires, most of the production being shipped across the lake to Chile Chico and then via the Argentine highway system to market.

Magallanes is the most important economic area in this region. The Atlantic side encompasses great plains supporting some 2.5 million sheep which produce over 20 million pounds of wool each year. This Province has the only oil and gas fields to be located and exploited in Chile. These are located on the northeastern part of the island of Tierra del Fuego or very nearby. Gases are processed in two refineries on the island, although most gas derived from oil-drilling operations is reinjected. Chile hopes to use this gas in its planned development of a petrochemical industry. Most of the crude oil produced is now shipped north to the Concon refinery.

There are large deposits of low-grade coal and lignite as well as peat in Magallanes, but actual production is small. There is some gold placer mining, silver fox farming, and lumbering. There is no agriculture, and fishing is of secondary importance.

Punta Arenas.—Punta Arenas (population 52,595 in 1960) is the world's southernmost city. It lies 1,688 nautical miles southeast of Valparaiso (via Puerto Montt), 1,295 nautical miles southwest of Buenos Aires, and 6,146 nautical miles south of New York. Punta Arenas is a free port.

Other cities.—The only other towns of any consequence are Puerto Natales (population 11,053), 158 miles northwest of Punta Arenas by road, and Porvenir (3,017), across the Straits of Magellan from Punta Arenas.

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APPENDIX D. APPENDIX TABLES

Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64
[Thousands of dollars]

Section	Group	Description	Value/supplier 1961		1962		1963		1964	
I		Mineral Products		36,660		28,859		28,091		34,552
			US	13,701	VZ	10,131	VZ	7,526	US	14,668
			VZ	6,976	US	6,037	US	7,015	VZ	5,845
			NA	6,211	NA	5,672	NA	6,047	NA	5,228
			PR	3,450	PR	2,554	PR	2,247	PR	2,713
	1	Ores, crude or simply worked; pure metals		4,324		3,275		5,076		6,819
			UK	1,805	US	1,401	US	2,285	US	2,322
			US	1,483	UK	1,267	UK	1,368	UK	2,263
			CN	331	PR	246	CN	568	MX	894
	2	Nonmetallic minerals, crude or simply worked		3,167		1,853		2,292		4,009
			US	2,522	US	975	US	1,140	US	2,952
			PR	259	PR	230	GR	251	PR	278
			GR	135	AR	208	PR	223	GR	262
	4	Coal and mineral fuels		29,168		23,731		20,723		23,730
			US	9,697	VZ	10,131	VZ	7,256	US	9,393
			VZ	6,976	NA	5,664	NA	6,047	VZ	5,845
			NA	6,211	US	3,661	US	3,590	NA	5,181
			PR	2,962	PR	2,078	PR	1,667	PR	1,850
II		Natural water and forest products		4,991		3,410		7,370		4,009
			US	2,118	UK	1,099	UK	2,627	US	2,952
			UK	931	US	984	US	2,055	PR	277
			SG	863	SG	543	SP	684	GR	262
	5	Unworked wood		119		37		84		87
			US	88	US	16	US	46	US	55
			PR	18	PR	14	AR	29	PR	16
	6	Other forest products		4,873	US	968		7,286		6,332
			US	2,030		3,373	UK	2,627	US	2,033
			UK	931	UK	1,099	US	2,009	UK	1,991
			SG	863	SG	543	SP	684	FM	817
III		Animal products (unmanufactured)		38,250		29,740		28,623		37,422
			AR	34,993	AR	25,930	AR	26,141	AR	35,584
			UK	1,618	UK	2,104	US	760	UR	505
			UR	507	GR	270	GR	645	GR	445
	7	Hunting products		13		13		0		0
			UK	6	UK	12				
			US	5	US	1				
	8	Fishery products		70		30		16		17
			NO	27	HG	9	NO	6	NO	7
			JP	12	NO	9	US	3	DN	5
	9	Live animals		31,027		24,314		18,749		27,740
			AR	30,869	AR	24,019	AR	18,487	AR	27,186
			US	76	US	179	US	129	AU	317
	10	Wool and other textiles of animal origin, crude		4,269		4,061		6,178		5,974
			AR	1,758	UK	2,035	AR	4,922	AR	5,654
			UK	1,556	AR	986	UR	760	UR	198
	11	Hides and skins and animal offal, crude		2,435		988		2,803		3,080
			AR	2,365	AR	925	AR	2,732	AR	2,724
			GR	36	UR	23	GR	53	UR	307
	12	Aviculture, apiculture, and sericulture		436		334		877		610
			GR	300	GR	162	GR	566	GR	405
			US	84	FR	78	UK	177	UK	123
IV		Agricultural products		41,936		56,965		95,787		61,794
			US	12,590	US	19,394	US	31,377	US	21,094
			PR	6,544	PR	17,144	PR	21,465	MX	10,719
			BR	5,414	BR	5,391	BR	10,868	PR	8,497
			AR	5,054	AR	3,690	EC	7,198	BR	8,457

Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued

[Thousands of dollars]

Section	Group	Description	Value/supplier 1961		1962		1963		1964	
	13	Live plants and seeds		949		1,039		805		1,013
			US	402	US	592	US	596	US	704
			GR	157	IT	145	AU	54	NZ	71
			CU	103	GR	117	DN	43	GR	65
	14	Cereals		7,422		18,983		28,350		20,078
			AR	4,692	US	15,375	US	22,398	US	16,987
			US	2,678	AR	3,582	AR	4,378	SP	1,181
			UR	30	UR	18	UR	894	UR	970
			BR	13	BR	6	AU	671	AR	887
	15	Legumes		60		123		9		4
			US	59	US	123	US	8	US	4
	16	Fruits and vegetables		2,529		2,814		7,487		3,618
			EC	2,196	EC	2,448	EC	6,952	EC	3,331
			AR	259	PR	283	PR	440	PR	192
	17	Vegetable food products, stimulants		13,895		12,728		22,210		14,326
			BR	5,188	BR	5,257	BR	10,131	BR	8,242
			CY	3,990	CY	3,577	CY	6,992	AR	2,372
			UK	2,334	UK	2,423	UK	2,163	CY	1,454
	18	Spices		375		192		254		173
			US	84	SG	58	CY	63	BR	76
			SG	71	US	38	BR	48	CY	35
			UK	69	UK	26	UK	41	UK	17
	19	Forage and animal feeds, n.e.s.		14		1		1		3
			PR	9	AR	1	AR	1	AR	2
			AR	4	US	1			US	2
	20	Raw textile materials of vegetable origin		14,780		20,548		31,848		19,476
			US	7,754	PR	16,787	PR	20,535	MX	10,612
			PR	6,513	US	2,338	MX	5,753	PR	8,205
			MX	207	MX	1,139	US	4,338	US	293
	21	Oleaginous vegetable materials, crude		114		25		98		56
			BR	75	EC	11	EC	58	EC	47
			EC	35	AR	9	BR	35	MX	5
	22	Tobacco, crude		1,797		511		4,725		3,048
			US	1,279	US	403	US	3,720	US	2,758
			UK	307	CN	79	UK	394	UK	142
V		Manufactured food products		41,230		37,804		49,295		53,612
			PR	11,645	US	10,453	AR	11,847	PR	18,246
			AR	9,883	AR	8,373	US	10,286	AR	12,135
			US	9,747	CU	4,821	CU	8,739	US	11,543
			UR	3,324	NE	3,275	BR	4,222	DR	2,199
	24	Meats, including jerked and salted		4,152		4,300		2,820		8,257
			AR	4,037	AR	4,112	AR	2,736	AR	8,104
			NE	45	DN	109	DN	66	UR	126
	25	Edible fats and derivatives		2,621		2,328		4,616		2,532
			AR	2,343	AR	1,823	AR	3,659	AR	1,651
			US	224	US	274	NE	582	US	471
			NE	25	NE	210	US	346	NE	241
			NZ	15	UR	213	DN	14	GR	140

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Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued

[Thousands of dollars]

Section	Group	Description	Value/supplier 1961		1962		1963		1964	
	26	Milk, cheese, and butter		5,396		8,593		9,522		5,450
			AR	2,214	DN	2,271	US	3,067	US	4,237
			US	2,081	US	2,032	AR	2,710	AR	779
			NE	778	NE	1,458	NE	1,456	NE	251
			DN	254	PO	924	DN	1,209	DN	80
	27	Starch, flour or meal, and derivatives		3,757		4,630		3,054		3,074
			US	3,100	US	3,625	US	1,811	US	2,909
			FR	462	FR	906	FR	710	FR	69
			GR	98	CN	63	GR	386	GR	44
	28	Edible oils		5,091		6,063		6,502		5,029
			US	3,435	US	3,894	US	4,788	US	3,506
			NE	830	NE	1,462	NE	989	NE	747
			DN	385	DN	240	DN	299	DN	385
	29	Preserved and prepared foods		2,753		1,985		1,187		805
			US	669	US	518	UK	289	UK	198
			UK	485	UK	389	US	222	US	151
			SZ	375	SZ	290	SZ	187	AR	104
	30	Sugar and derivatives		17,460		9,905		21,593		28,465
			PR	11,640	CU	4,821	CU	8,739	PR	18,217
			BR	3,323	AR	1,571	BR	4,163	DR	2,199
			AR	909	BR	1,047	AR	2,503	UK	1,693
VI		Beverages		1,455		738		442		393
			UK	936	UK	456	UK	271	UK	273
			PR	173	US	89	US	46	US	33
			US	106	DN	50	FR	41	FR	30
			FR	60	FR	46	DN	28	DN	20
	31	Wines		62		30		23		23
			FR	22	FR	13	FR	12	FR	11
			SP	17	SP	6	PO	3	UK	4
	32	Spirits and liqueurs		1,026		549		357		334
			UK	897	UK	433	UK	257	UK	256
			FR	36	DN	31	FR	20	FR	19
	33	Beer and cider		112		34		4		1
			PR	40	PR	17	US	1		
	34	Mineral waters and other non-alcoholic beverages		256		124		59		35
			PR	132	US	66	US	24	US	17
			US	85	PR	22	FR	9	UK	13
VII		Manufactured tobacco		42		28		30		34
			US	17	US	12	US	21	US	25
			CU	16	CU	8	DN	3	DN	3
	35	Prepared tobacco		4		3		3		3
			US	4	US	1	US	2	US	2
	36	Cigars and cigarettes		38		25		27		31
			CU	16	US	10	US	19	US	23
			US	14	CU	8	DN	3	DN	3
VIII		Textile products		26,106		31,537		17,139		14,222
			US	9,602	US	11,069	US	5,898	US	5,760
			IN	2,425	GR	4,363	IN	2,474	IN	2,220
			JP	2,398	UK	3,255	UK	1,639	UK	1,517
			UK	2,058	IN	2,122	GR	1,251	GR	1,209
	37	Yarns		4,408		2,040		2,460		1,900
			CN	1,409	CN	459	JP	785	JP	441
			US	1,209	UK	344	US	673	UK	345
			FR	697	CZ	256	FR	192	GR	250
	38	Cordage		350		327		497		596
			GR	113	PH	71	UK	101	GR	115
			UK	100	US	62	US	99	UK	103

Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued

[Thousands of dollars]

Section	Group	Description	Value/supplier 1961		1962		1963		1964	
	39	Fabrics		4,525		2,853		4,204		3,441
			NE	1,428	US	738	US	1,883	US	2,486
			US	824	NE	553	NE	1,106	UK	329
			JP	823	JP	508	GR	351	GR	208
	40	Bags and packings		3,939		3,996		4,501		3,823
			IN	2,400	IN	2,099	IN	2,432	IN	2,170
			PK	821	PK	963	PK	891	PK	742
			UK	495	UK	539	UK	748	UK	541
	41	Trimmings and ribbons		92		85		90		110
			US	24	GR	23	US	37	US	37
			GR	17	US	19	GR	19	GR	25
			JP	14	NE	15	CN	12	JP	22
	42	Wearing apparel		11,536		7,686		4,239		3,555
			US	6,745	US	4,488	US	2,357	US	2,367
			JP	1,449	GR	839	GR	525	GR	478
	43	Household wares of textile materials		757		597		415		305
			US	223	GR	128	US	131	GR	107
			GR	94	US	107	GR	102	US	76
	44	Manufactures of textile materials, n.e.s.		498		184		732		493
			US	387	US	132	US	656	US	438
			GR	34	GR	19	GR	31	GR	25
IX		Chemicals and related products		67,072		45,475		96,738		78,755
			US	31,783	US	20,989	US	36,267	US	32,936
			GR	11,693	GR	6,920	GR	20,208	GR	15,197
			UK	4,699	BL	3,334	UK	6,424	UK	5,800
			BL	2,695	UK	2,774	FR	3,601	FR	3,003
	45	Chemicals		17,622		13,144		26,864		22,881
			US	8,235	US	5,193	US	8,217	US	7,300
			GR	3,301	GR	2,236	GR	5,297	GR	4,457
			UK	1,588	UK	1,463	UK	2,590	UK	2,422
			SZ	1,019	FR	1,167	FR	2,380	FR	2,277
	46	Medicinal drugs, pharmaceuticals and toilet preparations		6,702		4,501		9,387		7,408
			US	3,390	US	2,111	US	4,255	US	2,769
			GR	1,352	GR	907	GR	2,034	GR	1,969
			UK	478	UK	304	NE	719	NE	837
			IT	336	NE	270	SZ	555	UK	514
	47	Artificial fertilizers		7,907		11,969		13,535		10,368
			US	3,188	US	5,238	US	5,741	US	6,558
			BL	2,341	BL	3,154	GR	3,354	BL	2,298
			GR	1,790	GR	2,228	BL	2,816	GR	1,130
	48	Explosives, matches and other pyrotechnical articles		983		1,394		1,623		1,737
			US	555	US	684	US	671	US	904
			UK	286	UK	533	UK	582	UK	767
	49	Blacking, resins, and industrial fats and oils		16,861		13,736		21,205		16,664
			US	9,268	US	5,617	US	8,319	US	7,113
			GR	1,675	NA	2,605	GR	4,449	GR	3,737
			PR	1,512	GR	1,539	NA	3,332	NA	2,259
			NA	1,435	PR	1,287	UK	893	MX	548
	50	Industrial alcohols		60		77		85		116
			US	48	US	72	US	79	US	114

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Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued

[Thousands of dollars]

Section	Group	Description	Value/supplier 1961	1962	1963	1964
	51	Colors, varnishes, inks and dyestuffs	5,510	3,837	8,092	6,517
			GR 1,882	GR 1,487	GR 2,434	GR 2,381
			US 1,598	US 1,076	US 2,034	US 1,516
			UK 727	UK 541	MX 1,061	SZ 811
			SZ 578	SZ 247	SZ 1,035	UK 780
	52	Soaps and candles	838	509	206	119
			US 516	US 276	US 104	US 39
			UK 107	GR 93	UK 39	UK 37
	53	Other chemical and industrial products	10,589	10,079	15,742	12,944
			US 4,985	US 5,922	US 6,848	US 6,628
			GR 1,575	GR 1,218	AR 2,736	AR 1,710
			AR 1,445	AR 1,108	GR 2,491	GR 1,481
			UK 783	UK 652	UK 1,062	UK 768
X		Metallurgical products	36,496	32,203	31,477	43,240
			US 17,990	US 13,147	US 13,280	US 15,970
			GR 8,086	GR 7,765	GR 7,248	GR 10,415
			UK 2,375	UK 2,154	UK 2,909	FR 2,815
			BL 1,798	JP 1,915	SD 1,129	UK 2,336
	54	Iron and steel	11,302	8,136	7,612	9,900
			US 6,865	US 3,409	US 3,237	GR 3,729
			GR 1,833	GR 1,857	GR 1,983	US 2,736
			BL 1,053	FR 680	UK 568	JP 1,052
			UK 388	BL 679	BL 434	FR 935
	55	Other metals, rolled or cast, and their alloys	631	576	668	659
			US 269	US 380	US 358	US 343
			GR 105	GR 52	GR 107	GR 84
	56	Metal wares for various purposes	1,232	1,685	1,203	1,261
			US 552	US 1,183	US 543	US 676
			GR 367	GR 278	GR 417	GR 301
			UK 126	BL 73	UK 115	UK 128
	57	Wares of iron or steel (including those plated with other metals	18,868	18,851	17,833	28,246
			US 8,774	US 6,867	US 7,518	US 10,668
			GR 4,079	GR 4,718	GR 3,599	GR 5,708
			UK 1,540	UK 1,525	UK 1,918	AR 2,180
			IT 778	JP 1,316	SD 965	FR 1,770
	58	Wares of other metals	4,463	2,954	4,161	3,174
			GR 1,702	US 1,308	US 1,623	US 1,545
			US 1,531	GR 860	GR 1,142	GR 592
			UK 265	UK 206	DN 329	DN 190
			DN 192	FR 101	UK 241	JP 147
XI		Machinery and tools	132,362	121,313	152,735	157,702
			US 65,648	US 59,738	US 70,813	US 74,343
			GR 26,182	GR 25,412	GR 29,065	GR 25,620
			UK 11,156	UK 7,561	UK 15,128	UK 13,080
			IT 5,700	FR 6,752	FR 7,022	FR 7,103
	59	Mining machinery, implements, accessories and tools	5,985	6,074	4,718	6,439
			US 4,785	US 3,189	US 3,088	US 3,965
			GR 556	FR 1,410	GR 818	FR 922
			UK 230	GR 784	UK 339	GR 887
			SD 218	UK 182	SD 228	SD 298
	60	Agricultural machinery, implements, accessories and tools	8,288	7,976	6,767	4,999
			US 3,989	US 4,426	US 3,099	US 2,886
			UK 1,196	UK 1,381	UK 1,537	UK 1,041
			GR 798	CN 808	GR 1,044	BL 403
			CN 762	GR 805	BL 319	CN 151
	61	Machinery, accessories and tools, n.e.s., for industries and trades	73,808	69,383	89,937	99,801
			US 36,646	US 33,947	US 38,911	US 45,335
			GR 17,911	GR 16,974	GR 19,340	GR 16,889
			UK 4,646	UK 3,318	UK 7,348	UK 5,250
			IT 1,927	FR 2,397	SZ 3,464	DN 5,150

Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued

[Thousands of dollars]

Section	Group	Description	Value/supplier 1961	1962	1963	1964
	62	Motive machinery, boilers and spare parts	16,242	13,130	22,359	20,309
			US 9,490	US 7,590	US 13,235	US 10,477
			GR 2,547	GR 1,932	GR 3,518	UK 4,381
			UK 1,660	UK 1,062	UK 2,613	GR 2,632
			IT 673	SD 978	FR 893	CN 633
	63	Electric machinery, apparatus and material	28,039	24,750	28,954	26,154
			US 10,738	US 10,585	US 12,481	US 11,680
			GR 4,371	GR 5,097	GR 4,344	GR 5,077
			UK 3,425	FR 2,610	UK 3,289	FR 2,649
			IT 2,958	UK 1,619	FR 2,599	UK 2,307
XII		Transport machinery, materials and accessories	115,129	85,098	74,883	74,136
			US 57,991	US 41,642	US 31,303	US 27,050
			GR 23,107	GR 9,818	FR 10,074	FR 16,334
			JP 10,065	FR 9,018	UK 8,012	IT 7,125
			UK 8,605	UK 7,140	GR 7,021	UK 6,453
	64	Railway and tramway equipment and material	20,718	30,750	22,752	15,716
			US 10,430	US 16,039	US 6,711	IT 5,766
			JP 8,354	FR 4,443	IT 4,620	JP 4,413
			GR 997	JP 4,141	JP 4,455	US 4,043
			UK 580	IT 3,926	FR 4,121	GR 603
	65	Watercraft and navigation material	9,727	3,353	6,526	7,408
			GR 5,937	PN 1,267	DN 3,342	FR 2,400
			DN 2,695	GR 611	FR 1,483	GR 1,874
			US 639	PR 609	US 1,237	PR 873
	66	Vehicles, n.e.s., and their components and spares	84,684	50,995	45,604	51,013
			US 46,922	US 25,218	US 23,354	US 22,329
			GR 16,174	GR 8,561	UK 6,528	FR 13,806
			UK 7,946	UK 5,915	GR 5,722	UK 5,669
			FR 4,419	FR 4,564	FR 4,470	GR 3,571
XIII		Miscellaneous manufactured products	48,736	38,406	54,290	44,898
			US 16,186	US 11,142	US 14,924	US 16,833
			GR 10,330	GR 8,598	GR 10,348	GR 6,936
			JP 3,613	JP 2,143	IT 3,941	UK 4,462
			UK 2,684	SP 2,090	UK 3,783	AR 2,391
	67	Prepared stones and earths	2,784	1,725	3,003	2,813
			CN 1,335	CN 678	CN 1,481	CN 1,003
			US 530	US 421	US 683	US 952
			GR 261	GR 246	UK 348	UK 409
	68	Ceramics	5,425	4,142	4,622	6,438
			US 2,410	US 1,564	US 1,863	US 3,684
			GR 1,201	GR 944	GR 1,156	GR 1,392
	69	Manufactures of wood	479	585	236	228
			SD 263	SD 239	US 126	US 94
			GR 80	GR 119	SD 27	GR 46
	70	Cabinet-maker's wares and other wares of wood or compressed sawdust	501	530	472	337
			US 185	US 181	US 201	US 175
			GR 137	GR 151	GR 84	GR 59
	71	Manufactured cork and cork products	62	18	15	20
			SP 28	US 8	US 4	SP 10
			PO 14	SP 7	SP 4	US 5

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Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued

[Thousands of dollars]

Section	Group	Description	Value/supplier 1961		1962		1963		1964	
	72	Manufactures of rubber, celluloid and similar materials		3,510		2,497		2,445		2,653
			US	1,545	US	1,003	US	1,036	US	989
			GR	717	GR	519	UK	410	JP	506
			JP	411	JP	382	GR	409	GR	393
			UK	246	UK	164	CN	124	UK	281
	73	Tannery products, furs and their derivatives		847		607		598		835
			US	297	US	324	US	394	US	738
			IT	239	IT	111	CZ	86	CZ	33
	74	Manufactures of horn, bone and other animal materials, and similar products		45		11		4		7
			HG	17	HG	4	AR	3	IN	3
	75	Paper and paperboard		4,394		3,105		4,979		4,132
			US	1,255	US	841	US	1,197	US	1,107
			FN	1,072	FN	687	FN	1,036	FN	880
			GR	735	GR	453	UK	908	UK	543
			UK	496	UK	452	GR	624	GR	461
	76	Printed matter and engravings on paper or paperboard		5,030		6,786		7,801		5,073
			SP	1,676	AR	2,450	AR	2,422	AR	1,482
			AR	1,138	SP	1,893	US	1,913	US	1,306
			US	813	MX	979	SP	1,482	SP	1,041
			MX	750	US	742	MX	1,132	MX	589
	77	Arms and ammunition		673		303		1,877		544
			US	359	GR	88	UK	629	IT	291
			GR	198	US	80	SZ	385	US	156
	78	Jewelry, gold- or silver-smiths' wares, and timekeeping wares		1,475		1,162		791		537
			SZ	591	SZ	499	SZ	389	SZ	327
			GR	539	GR	398	GR	249	GR	111
	79	Articles and instruments for the sciences, fine arts, and their applications		19,195		13,395		14,799		12,186
			US	7,136	GR	4,618	US	5,257	US	4,960
			GR	5,237	US	4,566	GR	4,694	GR	3,427
			JP	1,725	JP	990	UK	936	AR	685
			NE	1,001	IT	521	NE	575	UK	486
	80	Works and objects of pure art		15		110		17		20
			MX	5	SP	35	GR	6	IT	5
			US	4	US	34	US	5	MX	4
			GR	2	FR	33	SZ	1	GR	4
	81	Various manufactures and products		4301		3,429		12,632		9,075
			US	1,494	US	1,281	IT	3,345	US	2,648
			GR	940	GR	740	GR	2,293	UK	2,391
			JP	818	JP	433	US	2,019	SZ	772
			UK	250	NE	260	SZ	1,527	GR	632
XIV		Specie and precious metals		50		266		627		21
			GR	48	GR	189	US	381	US	8
			US	2	PR	58	GR	175	GR	5
					US	18	PR	67	IT	5
							UK	2	SZ	3

Notes:
AR — Argentina
AU — Australia
BL — Belgium
BR — Brazil
CN — Canada
CU — Cuba
CY — Ceylon
CZ — Czechoslovakia
DN — Denmark
DR — Dominican Republic
EC — Ecuador
FM — Malaya, Federation of
FN — Finland
FR — France
GR — Germany, Federal Republic of
HG — Hong Kong
IN — India
IT — Italy
JP — Japan
MX — Mexico
NA — Netherlands Antilles
NE — Netherlands
NO — Norway
NZ — New Zealand
PH — Philippines
PK — Pakistan
PN — Panama
PO — Portugal
PR — Peru
SD — Sweden
SG — Singapore
SP — Spain
SZ — Switzerland
UK — United Kingdom
UR — Uruguay
US — United States
VZ — Venezuela

Table 1.—Chilean Imports, by Sections and Commodity Groups, Total and from Principal Suppliers, 1961-64 —continued
[Thousands of dollars]

Section Group	Description	Value/supplier 1961	1962	1963	1964
Total		590,514	511,841	637,528	607,199
		US 237,700	US 194,952	US 223,852	US 222,530
		GR 82,438	GR 64,309	GR 77,427	GR 67,251
		AR 55,072	AR 42,827	AR 52,514	AR 61,232
		UK 40,609	UK 32,942	UK 46,065	UK 41,711
		PR 24,043	PR 23,983	PR 26,518	PR 31,782
		JP 20,715	FR 23,247	FR 24,880	FR 30,321
		IT 14,638	JP 14,601	BR 18,763	MX 16,399
		FR 14,009	IT 12,626	IT 16,659	IT 14,269
		BR 9,794	VZ 10,373	JP 12,456	BR 12,236
		NE 8,648	NA 8,293	MX 11,048	JP 11,920
		NA 7,696	NE 8,204	NE 10,873	CN 10,573
		BL 7,539	BR 7,118	SZ 10,541	DN 7,546
		DN 7,263	BL 6,972	NA 9,408	NA 7,499
		VZ 7,047	SD 6,467	DN 9,074	SZ 7,389
		SD 7,042	DN 6,231	CU 8,993	VZ 6,116
		CN 6,905	CN 5,452	SD 8,258	NE 6,082
		SZ 5,701	CU 4,851	BL 7,545	SP 5,738
		SP 4,196	SZ 4,699	CN 7,510	SD 5,399
		CY 4,127	SP 4,034	VZ 7,444	BL 5,324
		IN 3,799	PN 3,793	EC 7,255	NO 3,857
		PN 3,067	CY 3,675	CY 7,168	EC 3,805
		EC 2,379	IN 2,711	SP 5,900	PN 3,032

Source: Camara de Comercio, *Comercio Exterior, Chile, 1964*, Santiago, 1965.
Notes: Chilean trade statistics no longer include groups 3 and 23.
Detail may not add to totals because of rounding.

Table 2.—Trade by Geographic Areas and With Principal Countries, 1961-64
[Thousands of dollars]

Area and country	Imports (c.i.f.) 1961	1962	1963	1964	Exports (f.o.b.) 1961	1962	1963	1964
Western Hemisphere:	360,707	311,485	383,405	385,196	231,518	246,707	239,739	273,977
United States	237,710	194,979	223,889	222,719	185,790	193,956	184,987	215,742
Canada	6,905	5,452	7,510	10,573	322	1,091	658	386
19 Latin American Republics:[1]	105,410	95,564	131,190	140,671	41,691	45,307	53,284	56,987
LAFTA[2]	94,476	80,540	120,029	128,890	34,812	39,382	49,325	54,493
Argentina	55,072	42,827	52,514	61,232	23,171	14,857	14,475	20,700
Brazil	9,794	7,118	18,763	12,236	6,282	18,513	26,963	23,034
Ecuador	2,379	2,506	7,255	3,805	478	454	740	1,172
Mexico	2,045	2,815	11,048	16,399	286	682	1,157	1,837
Peru	24,043	23,983	26,518	31,782	2,863	3,121	3,708	4,050
Venezuela	7,047	10,373	7,444	6,116	1,050	1,368	1,365	1,398
Netherlands Antilles	7,696	8,293	9,408	7,499	7	13	19	10
Western Europe:	195,689	172,685	221,139	197,189	246,663	248,452	257,824	291,472
European Economic Community	127,272	115,548	137,384	123,247	144,240	145,937	145,995	176,040
Belgium	7,539	6,972	7,545	5,324	3,660	7,937	9,990	19,243
France	14,009	23,247	24,880	30,321	10,187	10,487	11,945	17,778
Italy	14,638	12,626	16,659	14,269	15,861	22,573	24,824	16,508
Netherlands	8,648	8,204	10,873	6,082	51,926	44,152	38,343	45,792
Federal Republic of Germany	82,438	64,498	77,427	67,251	62,606	60,787	60,892	76,720
Denmark	7,263	6,231	9,074	7,546	916	981	1,001	1,707
Spain	4,196	4,034	5,900	5,738	5,237	5,607	7,690	8,846
Sweden	7,042	6,467	8,258	5,399	18,516	20,568	27,739	22,343
Switzerland	5,701	4,699	10,541	7,389	181	269	345	107
United Kingdom	40,609	32,942	46,065	41,711	76,659	74,159	74,320	78,809
Eastern Europe	1,409	2,672	3,755	1,982	1,226	1,638	3,032	1,963
Asia:	31,803	23,942	26,723	20,328	27,114	35,053	40,763	57,250
Ceylon	4,127	3,675	7,168	1,506	.....	12	.....	.....
Japan	20,715	14,601	12,456	11,920	26,164	34,037	39,598	55,836
Other countries	906	1,056	2,506	2,504	1,643	232	604	1,070
Total	590,514	511,840	637,528[3]	607,199	508,164	532,082	541,962	625,732

[1] Excluding Cuba.
[2] Latin American Free Trade Association; also includes Colombia, Paraguay, and Uruguay. Venezuela did not accept membership in LAFTA until July 12, 1966.
[3] Revised estimate shows imports totalled $557 million; however, country distribution on the revised basis is not available. Total shown in table includes imports which entered during the two preceding years, according to the Central Bank of Chile.
Source: Direccion General de Estadistica y Censos, *Comercio Exterior, 1961-62*, Santiago, 1962-63; Camara de Comercio, *Comercio Exterior, 1963-64*, Santiago, 1964-65.

Table 3.—United States Exports to Chile by Commodity Sections and Principal Commodity Groups, 1964-65

[Thousands of dollars]

Commodity section and commodity group	1964	1965
Food and live animals	22,498	24,293
Milk and cream, dry	2,023	4,191
Butter	1,796	1,564
Wheat, unmilled	13,308	10,546
Rice	1,138	1,103
Meal and flour of wheat or of meslin (including groats)	2,282	2,519
Beverages and tobacco	3,000	2,851
Tobacco, unmanufactured	2,951	2,695
Crude materials, inedible, except fuels	4,997	6,415
Crude rubber, (including synthetic and reclaimed and similar natural gums)	1,935	2,143
Chemical woodpulp, dissolving grades	991	1,155
Mineral fuels, lubricants and related materials	6,339	6,643
Coal	1,756	1,260
Petroleum products	4,574	5,345
Animal and vegetable oils and fats	3,316	3,849
Fixed vegetable oils, soft	2,532	3,703
Chemicals	21,402	27,399
Organic chemicals	1,796	5,527
Medicinal and pharmaceutical products	2,870	3,206
Fertilizers, manufactured	5,668	5,613
Plastic materials, regenerated cellulose and artificial resins	1,976	3,146
Machinery and transport equipment	86,918	119,723
Machinery	69,426	89,279
Industrial machinery	47,755	65,252
Power generating machinery, except electric	5,381	9,715
Metalworking machinery	4,380	3,881
Textile and leather machinery	3,919	9,505
Machines for special industries	12,419	17,955
Other	21,656	24,196
Agricultural machinery and implements	5,539	5,861
Office machines	1,009	1,157
Electrical machinery, apparatus, and appliances	15,122	17,009
Electric power machinery and switchgear	7,719	6,908
Equipment for distributing electricity	1,065	1,057
Telecommunications apparatus	2,010	3,940
Other	4,328	5,104
Transport equipment	17,492	30,444
Railway vehicles	2,981	4,106
Road motor vehicles and parts	12,996	21,757
Manufactured goods	26,717	41,424
Articles of rubber	1,963	2,211
Textile yarn and thread	2,474	2,326
Clay construction materials and refractory construction materials	1,835	3,092
Iron and steel mill products	4,691	11,522
Rails and railway track construction material of iron or steel	1,226	908
Tubes, pipes, and fittings of iron or steel	2,227	4,601
Finished structural parts and structures	1,088	2,588
Hand and machine tools	1,846	2,280
Scientific, medical, optical, (photographic) measuring and controlling instruments and apparatus	1,743	2,732
Printed matter	893	1,212
Miscellaneous commodities and transactions	4,834	2,287
Domestic exports, total	180,021	234,884
Reexports	454	423
Exports, total, including reexports	180,475	235,307

Source: Basic data of the U.S. Department of Commerce, Bureau of the Census.

Table 4.—Total U.S. Economic Assistance to Chile, Disbursements, Calendar Years 1961-65

[Millions of dollars]

Agency	1961	1962	1963	1964	1965	1961-65
Agency for International Development	49.3	67.2	75.4	76.9	55.3	324.1
Export-Import Bank of Washington	59.7	21.4	34.6	15.9	26.6	158.2
Food for Peace[1]	27.2	12.3	19.2	21.2	15.0	94.9
Social Progress Trust Fund[2]	0	1.9	3.9	6.6	9.5	21.9
Peace Corps	0	.1	.4	.7	2.9	4.1
Total	136.2	102.9	133.5	121.3	109.3	603.2

Note: Data shown excludes: Export-Import Bank of Washington debt rescheduling and consolidation credits; U.S. Treasury compensatory financing; value of goods delivered under Food for Peace Program (Public Law 480, Title I) which result in generation of local currency for U.S. uses; and U.S. subscription to Inter-American Development Bank.

[1] Program for disposal of surplus agricultural products administered under U.S. Public Law 480.

[2] Fund administered by the Inter-American Development Bank. Does not include technical assistance.

Source: *Report Prepared by the Government of the United States of America for the Inter-American Committee on the Alliance for Progress and the Fourth Meeting of the Inter-American Economic and Social Council*, Washington, February 1966.

Table 5.—Employment by Economic Sectors, 1960

Activity	Number of persons (thousands)	Percentage
Agriculture, forestry and fisheries	701	30
Mining	93	4
Manufacturing	444	19
Construction	140	6
Electric, gas, water, and sanitary services	23	1
Commerce, finance, etc.	257	11
Transportation and communications	117	5
Services, including Government	561	24
Total	2,336	100

Source: Corporacion de Fomento de la Produccion, *Geografia Economica de Chile*, Vol. V, Santiago, 1965.

Table 6.—Population by Provinces, 1960 and 1963

(Provinces listed from north to south)

Province	1960	1963
Republic, total	7,339,546	8,181,282
Tarapaca	122,665	136,546
Antofagasta	214,090	238,784
Atacama	114,277	128,961
Coquimbo	306,384	342,820
Aconcagua	139,878	155,935
Valparaiso	613,405	685,121
Santiago	2,429,539	2,704,299
O'Higgins	259,135	287,878
Colchagua	158,024	175,865
Curico	107,160	117,387
Talca	205,448	228,727
Maule	79,304	88,467
Linares	170,278	190,110
Nuble	284,516	316,910
Concepcion	537,711	598,595
Arauco	89,211	99,256
Bio-Bio	167,286	187,189
Malleco	174,185	193,387
Cautin	393,041	437,865
Valdivia	255,109	288,241
Osorno	143,955	159,772
Llanquihue	165,959	186,028
Chiloe	98,662	110,072
Aysen	37,085	41,902
Magallanes	73,037	81,165

Source: *El Mercurio, Santiago*, February 21, 1964, based on 1960 Census, by Direccion de Estadistica y Censos.

Table 7.—Estimated Distribution of Personal Income in 1960

Range of annual incomes (1960 escudos)	Number of persons (Thousands)	Number of persons (Percent)	Total income (Thousands of 1960 escudos)	Total income (Percent)
0— 170	505	15.7	42	1.4
170— 340	515	16.0	129	4.2
340— 800	631	19.9	338	10.9
800— 1,200	807	25.1	778	25.1
1,200— 2,200	341	10.6	458	14.8
2,200— 3,000	226	7.0	476	15.3
3,000— 6,000	150	4.6	563	18.2
6,000—12,000	28	0.9	241	7.8
12,000 or more	6	0.2	72	2.3
Total	3,209	100.0	3,097	100.0

Notes: US$1.00 equalled 1.05 escudos in 1960 at the official exchange rate. The official minimum living wage (sueldo vital)—legally defined as the wages necessary to meet an employee's indispensable needs for living and full maintenance—was 794 escudos in 1960.

Source: Corporacion de Fomento de la Produccion, *Geografia Economica de Chile*, Vol. V, Santiago, 1965.

Table 8.—Gross Domestic Product, Gross National Product, National Income, and Per Capita Income, Selected Years

[Millions of escudos]

Year	Gross domestic product	Gross domestic product	Gross domestic product	Gross national product	National income	National income
	Total	Total	Annual percentage increase	Total	Total	Per capita
	Current prices	Constant 1961 prices[1]				
1940	22	2,676	....	2,566	2,180	431
1945	54	3,125	....	3,068	2,695	493
1950	158	3,690	....	3,621	3,136	520
1955	1,041	4,431	....	4,363	3,603	532
1960	4,974	5,364	7.3	5,287	4,195	543
1961	5,538	5,538	3.2	5,457	4,480	564
1962	6,699	5,919	6.9	5,821	4,837	592
1963	9,993	6,061	2.4	5,948	5,004	596
1964	15,072	6,207	2.4	6,093	5,119	591
1965	20,399	6,517	5.0	6,398	(2)	(2)

[1] US$1.00=1.05 escudos in 1961 at the official rate of exchange.

[2] Not available.

Source: Corporacion de Fomento de la Produccion, *Cuentas Nacionales de Chile, 1940-1962*, and *1958-1963*, Santiago, June 1963 and 1964. Data for 1964 are estimates prepared by the National Planning Office (ODEPLAN).

Table 9.—Gross Domestic Fixed Capital Formation, 1962-64

[Millions of escudos at 1961 market prices]

Expenditures	1962	1963	1964
Construction and other works	336	303	323
Buildings	180	154	146
Public works	125	111	145
Other works	31	38	32
Machinery and equipment	410	455	428
Imported	374	419	390
Domestic	36	36	38

Source: *Cuentas Nacionales de Chile, 1958-1963*, Santiago, June 1964. Data for 1964 are estimates prepared by the National Planning Office (ODEPLAN).

Note: US$1=1.05 1961 escudos.

Table 10.—Gross Domestic Product by Economic Sectors, 1955, 1960, 1964

[Millions of escudos at 1961 market prices]

Sector	1955	1960	1964
Agriculture, forestry, and fishing	587	578	623
Fishing	12	12	16
Mining and quarrying	180	228	384
Industrial manufacturing	1,050	1,229	1,195
Construction	106	115	211
Electric, gas, water, and sanitary services	47	63	65
Transportation, storage, and communications	264	322	494
Commerce	907	893	1,396
Banking, insurance, and real estate	132	175	173
Rent	309	618	509
Government services	367	481	446
Private services	419	471	639
Adjustment[1]	64	22	72
Gross domestic product	[2]4,431	[2]5,364	6,207

[1] Adjustment for variation in the terms of trade.

[2] Revised GDP totals; revised data not available for industrial sectors.

Source: Corporacion de Fomento de la Produccion, *Cuentas Nacionales de Chile, 1940-1962*, and *1958-1963*, Santiago, June 1963 and 1964. Data for 1964 are estimates prepared by the National Planning Office (ODEPLAN).

Notes: Detail may not add to totals because of rounding. U.S.$1=1.05 1961 escudos.

Table 11.—Gross Domestic Product, by Expenditures, 1962-64

[Millions of escudos at 1961 market prices]

Expenditures	1962	1963	1964
Consumption expenditures	5,223	5,350	5,488
Private sector[1]	4,550	4,758	4,930
Public sector	673	592	558
Gross domestic investment	766	758	771
Fixed capital formation	747	758	751
Increase in inventories	19	0	20
Net imports of goods and services (—)	—101	—124	—124
Imports of goods and services	—702	—779	—801
Adjustments for changes in the terms of trade	31	77	72
Gross domestic product	5,919	6,061	6,207
Net payments to foreign factors (—)	—98	—113	—114
Gross national product	5,821	5,948	6,093

[1] Includes government and semi-autonomous enterprises.

Source: Corporacion de Fomento de la Produccion, *Cuentas Nacionales de Chile, 1958-1963*, Santiago, June 1964. Data for 1964 are estimates prepared by the National Planning Office (ODEPLAN).

Note: US$1=1.05 1961 escudos.

Table 12.—Production of Primary Copper, 1961-65

[1,000 metric tons fine copper]

Product	1961	1962	1963	1964	1965
Large Mines	481	510	507	528	479
Electrolytic	154	180	179	178	191
Fire refined	62	66	62	78	77
Blister	265	264	267	271	211
Medium and Small Mines	67	76	94	94	103
Fire refined	11	17	18	21	20
Blister	33	31	31	38	55
Cements[1]	6	8	12	12	15
Concentrates[1]	16	19	29	23	13
Ore[1]	1	1	3	[2]	[2]
Other[1]	....	....	[2]	[2]	0
Total	547	586	601	622	583

[1] Based on shipments.

[2] Less than 500 metric tons.

Source: Departamento del Cobre, *Estadistica Chilena; Cobre Primario*, Santiago, December 1964 and 1965.

Note: Detail may not add to totals because of rounding.

Table 13.—Production of Principal Agricultural and Animal Products, 1955 and 1964-65

[Thousands of metric tons]

Product	1955	1964	1965
Wheat	1,093	1,319	1,246
Oats	130	133	120
Barley	100	139	135
Corn	117	205	203
Rice, rough	91	86	82
Sugar beets	47	737	845
Potatoes	727	774	674
Beans, dry	78	95	82
Chickpeas	4	6	7
Lentils	18	21	17
Onions	91	104	100
Sunflower seed	40	45	50
Beef (carcass weight)	122	131	110
Pork (carcass weight)	47	40	40
Mutton (carcass weight)	29	25	25
Milk	770	1,133	998
Flaxseed	3	4	3
Rapeseed	0.2	51	74
Tobacco	6	5	5
Wool	22	25	26

Source: U.S. Department of Agriculture, Economic Research Service, *Indices of Agricultural Production for the 20 Latin American Countries*, revised 1954-64 and preliminary 1965, ERS-Foreign 44, January 1966.

Note: Available estimates for 1966: wheat, 1,150; oats, 130; barley, 131; and corn, 205 thousand metric tons.

Table 14.—Production of Principal Minerals, 1963-65

Mineral	1963	1964	1965
Copper ....m.t. fine	601	621	[1] 583
Iron ore ....1,000 m.t.	8,510	9,853	12,721
Nitrates ....1,000 gross m.t.	1,136	1,172	1,158
Iodine ....net m.t.	2,158	2,161	2,281
Gold ....kilogram fine	1,642	2,041	2,296
Silver ....m.t. fine	73	92	102
Calcium carbonate ....1,000 m.t.	1,712	1,772	1,751
Molybdenum ....m.t. fine	2,907	3,855	3,603
Lead ....-do-	1,150	1,102	1,269
Zinc ....-do-	481	963	1,296
Mercury ....-do-	21	10	13
Manganese ....gross m.t.	46	20	16
Petroleum ....1,000 cubic meters	2,100	2,176	2,020
Gas ....1,000,000 cubic meters	5,155	6,301	6,215
Coal ....1,000 net m.t.	1,604	1,677	1,626

[1] Provisional.

Source: Banco Central de Chile, *Boletin Mensual No. 459*, Santiago, May 1966.

Note: Abbreviations: m.t. fine=metric ton of fine metal; m.t.=metric ton; gross m.t.=gross metric ton; 1,000 net m.t.=1,000 net metric tons.

Table 15.—Production of Principal Petroleum Products by the Concon Refinery, 1956 and 1962-65

[Thousands of cubic meters]

Product	1956	1962	1963	1964	1965
Automotive gasoline	467	923	889	947	990
Aviation gasoline	0	70	59	66	51
Kerosene	25	253	290	301	294
Diesel oil	189	383	404	469	464
Fuel oil	270	636	613	647	[1]599
Liquid gas	2	65	68	74	86
Solvents[2]	1	14	16	21	([3])

[1] Data for 1965 apparently does not include residual fuel oils.

[2] Mostly turpentine and white gas.

[3] Not available.

Source: Empresa Nacional del Petroleo, *Memoria Anual 1964*, 1965 and *Boletin Estadisticas Resumen Anual, 1945-1963*, Vol. 22, Santiago, 1964. Banco Central de Chile, *Boletin Mensual No. 456*, Santiago, February 1966.

Table 16.—Production of Selected Products, 1959 and 1963-65

Product	1959	1963	1964	1965
Sugar ....1,000 m.t.	203	265	245	229
Pasta[1] ....-do-	38	51	55	54
Beer ....100,000 liters	112	123	107	165
Cigarettes ....millions	5,564	6,315	6,437	6,665
Paper ....1,000 m.t.	91	125	129	130
Tires ....1,000 units	224	371	478	506
Innertubes ....-do-	175	294	349	355
Rayon yarn ....1,000 m.t.	0	2	2	2
Rayon fiber ....-do-	0	2	3	3
Matches ....1,000 cases	186	245	226	248
Flat glass ....100,000 sq.m.	1,670	2,071	834	2,648
Cement ....1,000 m.t.	833	1,169	1,267	1,188

[1] Represents about 90 percent of production.

Source: Banco Central de Chile, *Boletin Mensual No. 459*, Santiago, May 1966.

Note: Abbreviations: m.t.=metric tons; sq.m.=square meters.

The term "unit" means one item.

Table 17.—Indexes of Industrial Production, 1957 and 1963-65

[1953 = 100]

	1957	1963	1964	1965[1]
Food products	103.3	127.1	132.0	135.3
Dairy products	122.6	158.4	165.9	150.0
Preserved fruits and vegetables	122.9	205.3	216.6	248.0
Preserved fish and shellfish	85.5	137.5	177.5	143.8
Milled grain products	113.0	92.2	99.0	103.3
Sugar production and refining	88.7	137.7	127.7	119.2
Miscellaneous food products	109.6	144.6	151.7	157.3
Beverages	115.8	156.5	145.0	181.3
Spirits	68.2	147.2	145.7	149.9
Beer and carbonated beverages	131.7	161.7	146.4	194.6
Tobacco products	85.9	120.8	128.1	138.0
Textiles	92.5	127.1	131.7	137.3
Yarn, fabric and finished textiles	88.8	106.4	106.8	110.7
Knitwear	120.3	263.4	295.1	314.9
Clothing and shoes	115.8	157.4	154.9	165.5
Shoes, not of rubber	134.1	169.5	161.0	172.5
Ready-made clothing	96.7	149.5	153.3	163.3
Furniture and household goods	76.3	98.0	108.8	119.3
Paper and paper products	118.1	236.0	235.6	261.4
Printing and publishing	90.7	113.0	115.0	128.1
Leather and leather goods	102.7	95.9	99.2	107.8
Rubber products	92.8	164.8	202.6	209.9
Chemicals and chemical products	111.7	135.8	133.5	132.2
Basic chemicals and fertilizers	114.3	149.3	129.8	136.7
Miscellaneous chemical products	113.5	132.5	136.3	134.6
Petroleum and coal derivatives	99.9	207.0	222.6	221.4
Nonmetallic mineral products	91.5	158.3	147.1	146.7
Glass and glass products	64.8	144.4	103.9	120.7
Ceramics, porcelain and pottery	125.6	210.1	205.0	183.6
Cement and asbestos, and their products	97.9	153.3	158.7	151.8
Basic metals	115.2	174.3	216.3	219.2
Basic iron and steel	122.2	185.0	197.2	184.0
Nonferrous metals	83.6	125.4	303.5	379.6
Metal products (excluding transport machinery and equipment	117.6	271.5	290.1	307.3
Machinery, apparatus and accessories (including electrical)	112.0	169.5	174.9	189.2
Miscellaneous manufactures	114.0	179.4	201.6	259.8
General Index	102.7	148.9	156.9	163.7

[1] Provisional.

Source: Banco Central de Chile, *Bolctin Mensual No. 459*, Santiago, May 1966.

Table 18.—CAP Shipments of Iron and Steel Products to the Domestic Market, 1962-64

[Thousands of metric tons]

Product	Year		
	1962	1963	1964
Merchant, total	157.3	152.7	165.0
Round and square bars under 2 inches:			
Reinforced concrete bars	67.7	61.2	65.3
Others	10.4	11.9	6.5
Grinding bars over 2 inches	6.5	7.9	8.2
Bars for grinding balls	19.7	15.2	23.0
Flat bars	4.2	5.1	2.9
Angles and light shapes	6.2	5.3	3.8
Railroad shapes	5.3	3.6	4.4
Wire rod	37.3	42.5	50.9
Flat Products, total	146.0	163.3	191.6
Plates	24.7	26.9	33.6
Coil plates	3.3	3.1	4.9
Hot rolled sheets	13.7	11.8	12.3
Galvanized sheet over 2 mm.	1.5	2.3	2.8
Coils over 2 mm.	22.4	24.3	33.0
Galvanized sheet	24.5	31.9	39.0
Cold rolled sheets	24.8	26.2	32.1
Tinplate	26.2	29.9	26.8
Black plate	0.3	0.4	0.3
Coils under 2 mm.	4.6	6.5	6.8
Semifinished and finished products, total	11.5	10.3	13.4
Other products, total	8.7	9.1	9.1
Pipe under 300 mm.	2.5	6.1	4.5
Pipe over 300 mm.	5.7	2.8	4.4
Culverts	0.5	0.2	0.2
Pig iron, total	5.5	9.1	10.1
Iron and steel, total	329.0	344.5	389.2

Source: Compania de Acero del Pacifico, S.A. (CAP).

Table 19.—Chilean Imports of Iron and Steel, 1962-64

[Thousands of metric tons]

Import	Year		
	1962	1963	1964
Merchant, total	10.0	10.4	7.8
Round and square bars	3.5	3.7	1.8
Grinding bars	1.4	1.4	1.4
Flat bars	.4	.4	.1
Angles and light shapes	.6	.5	.2
Wire and wire rod	2.8	2.9	3.5
Other bars	1.3	1.5	.8
Flat products, total	12.6	11.8	4.8
Plate	.5	1.8	.4
Strip steel over 200 mm.	.4	.3	.2
Sheet (hot and cold rolled)[1]	4.1	5.4	1.6
Galvanized sheet	3.2	1.7	.9
Tinplate	3.3	.7	.1
Other	1.1	1.9	1.6
Other products,[2] total	30.4	18.7	57.7
Welded and seamless pipe	23.2	8.9	40.9
Structures, shapes, tanks	3.5	8.1	16.3
Grinding balls	2.7	.4	0
Miscellaneous	.3	.5	.1
Ferroalloys	.7	.8	.4
Pig iron, total	0	0	0
Iron and steel, total	53.0	40.9	70.3

Source: Superintendencia de Aduanas.

[1] Customs data does not differentiate between hot and cold rolled sheets.

[2] This compilation of imports excludes manufactured iron and steel products such as rails, accessories and other transportation and agricultural items.

Table 20.—Consumption of Electricity by Category of Consumer, Various Years

[Millions of kilowatt hours]

Consumer	1950	1955	1960	1964
Residences	281	391	473	636
Commerce	91	137	185	266
Rural	8	40	80	101
Industry and Mining, total[1]	2,176	2,662	3,038	3,845
Sugar	8	15	30	43
Cement	104	127	128	181
Paper	113	125	256	388
Chemicals	56	101	95	114
Metallurgy	47	123	152	210
Coal	51	66	80	93
Copper	1,077	1,217	1,380	1,591
Iron[2]	13	8	24	36
Petroleum	....	15	32	55
Nitrate	293	346	302	377
Others	415	521	559	758
Public lighting	38	58	83	107
Transport	120	132	128	124
Central and local government	70	132	170	216
By electric producers	23	38	45	50
Lost	136	276	390	576
Consumption, total	2,943	3,866	4,592	5,928

[1] Industrial consumption totaled 466, 724, 949 and 1,425 million kilowatt-hours in 1950, 1955, 1960, and 1964, respectively.

[2] Estimated.

Source: Empresa Nacional de Electricidad, S.A. (ENDESA), *Produccion y Consumo de Energia en Chile: 1964*, Santiago, 1965.

Note: Detail may not add to totals because of rounding. Some figures are approximations.

Table 21.—Average Exchange Rates, 1956-65

[Chilean escudos per US$1]

	Bankers spot	Brokers spot
1956	.453	.534
1957	.621	.694
1958	.793	1.000
1959	1.047	1.055
1960	1.051	1.051
1961	1.051	1.051
1962	1.142	1.751
1963	1.875	3.011
1964	2.373	3.204
1965	3.131	3.739

Source: Banco Central de Chile, *Boletin Mensual No. 459*, Santiago, May 1966.

Note: Data for 1956-59 originally in pesos.

Table 22.—Annual Percentage Increase in Consumer Prices for Santiago Alone and Wholesale Prices in Chile, 1960-65

Year	Percentage increase consumer prices in Santiago alone	Percentage increase wholesale prices in Chile		
		Domestic	Imports	Total
1960	5.4	2.5	—0.4	1.6
1961	9.7	1.8	1.2	1.6
1962	27.7	29.5	21.1	26.8
1963	45.4	40.5	56.6	45.4
1964	38.4	44.0	43.1	43.7
1965	25.9	32.7	7.8	24.5

Source: Banco Central de Chile, *Boletin Mensual No. 459*, Santiago, May 1966 and various previous issues.

Note: Percentages represent the change in the price index from December of the preceding year to December of the year shown.

Table 23.—Balance of Payments, 1962-65

[Millions of dollars]

Item	1962	1963	1964	1965[1]
Current account	—202.1	—198.8	—132.6	—74.5
Merchandise	—112.0	—91.3	—33.1	54.8
Exports	490.9	494.4	590.4	665.9
Imports	—602.9	—585.7	—623.5	—611.1
Nonmonetary gold	.0	3.0	1.9	4.5
Merchandise services	4.6	—.2	6.6	—7.9
Transport and communications..	7.0	—5.5	9.0	(2)
Commercial services	—1.1	—2.1	—1.7	(2)
Insurance	—.7	—.9	—.6	(2)
Non-commercial transactions	—.6	8.3	—.1	(2)
Servicing of capital	—90.2	—90.0	—103.4	—134.8
Private	—70.9	—67.6	—80.7	—73.6
Official	—19.3	—22.4	—22.7	—61.2
Public sector transactions (net) ..	—3.1	.7	—5.8	—6.0
Private transactions (net)	—13.9	—25.5	—6.6	—9.9
Tourism and travel costs	—7.0	—20.4	—2.6	(2)
Donations	12.5	4.5	7.8	9.0
Official	8.5	.4	.2	.2
Private	4.0	4.1	7.6	8.8
Capital account	111.3	106.5	151.2	134.0
Private	13.6	—48.9	8.9	(2)
Long term	33.1	—26.0	7.4	(2)
Medium term	37.9	8.8	9.8	(2)
Short term	—57.4	—31.7	—8.3	(2)
Official	97.7	155.4	142.3	(2)
Long term	98.3	127.7	129.7	(2)
Medium term	—5.5	11.8	16.3	(2)
Short term	4.9	15.9	—3.7	(2)
Financing	73.7	27.1	—22.7	—59.5
Central Bank	19.8	29.6	—20.5	—40.0
Assets	—4.9	2.0	—11.9	—48.6
Liabilities	24.7	27.6	—8.6	8.6
Commercial banks	49.2	.0	—4.8	—15.6
Assets	6.9	—7.6	—.1	.5
Liabilities	42.3	7.6	—4.7	—16.1
Other institutions	4.7	—2.5	2.4	—3.9
Net errors and omissions	17.1	65.2	4.1	(2)

[1] Estimated. [2] Not available.

Source: Banco Central de Chile, *Boletin Mensual No. 459*, Santiago, May 1966.

Table 25.—Total Value and Volume of Imports and Exports, by Ports of Entry, 1964

[Value in millions of dollars and weight in thousands of metric tons]

Port of Entry	Imports		Exports	
	Value	Weight	Value	Weight
Antofagasta	41	315	200	289
Arica	29	76	5	46
Caldera	0	0	28	1,578
Castro	3	3	[1]	1
Chacalluta	0	0	[1]	1
Chanaral	9	123	69	1,300
Coquimbo	13	31	21	2,579
Coyhaique	[1]	[1]	[1]	4
Crus Grande	0	0	5	646
Huasco	0	0	27	3,147
Iquique	22	94	15	183
Lonquimay	[1]	1	0	0
Los Andes	25	60	[1]	3
Los Vilos	0	0	1	68
Puerto Aysen	1	1	1	7
Puerto Montt	4	23	[1]	3
Punta Arenas	38	63	10	71
San Antonio	31	261	148	276
Santiago	31	7	2	2
Talcahuano	73	744	9	78
Taltal	0	0	1	7
Tocopilla	15	508	33	854
Valdivia	4	28	1	16
Valparaiso	267	843	39	144
Others	1	4	8	70
Total	609	3,186	626	11,313

[1] Equals less than $500,000 or less than 500 metric tons.

Source: Banco Central de Chile, *Boletin Mensual No. 447*, Santiago, May 1965.

Note: Detail may not add to totals because of rounding.

Table 24.—Exports of Principal Commodities, Total and to the United States, 1962-64

[Thousands of dollars]

Commodity	Total			To United States		
	1962	1963	1964	1962	1963	1964
Copper ore, concentrates, precipitates and cement	9,372	12,203	12,274	0	800	276
Copper, electrolytic, standard or blister and refined ingots	214,981	210,630	211,073	32,058	20,860	30,758
Copper blister bars with gold and platinum	126,565	132,906	149,909	107,053	116,866	125,046
Copper bars and sheets	126	131	16,779	0	0	7,302
Molybdenum concentrates	9,904	11,680	14,740	0	0	0
Iron ore	56,240	57,194	69,585	26,004	20,537	21,839
Nitrate	30,350	30,134	29,748	14,618	13,771	11,906
Iodine	3,624	2,792	3,148	1,642	1,525	1,317
Wool	5,794	8,364	7,186	221	254	144
Rice	2,707	10	0	0	0	0
Beans	3,244	2,657	3,722	0	0	154
Lentils	2,926	2,666	3,359	0	0	0
Onions	1,873	1,984	1,106	515	87	191
Fruits, fresh	4,597	5,616	5,855	2,807	2,529	3,021
Fishmeal	7,073	9,230	15,904	1,111	2,124	1,424
Fish oil	1,042	1,292	2,074	0	0	0
Cellulose	3,073	1,907	1,583	(1)	0	1
Iron and steel sheets, plain	1,612	3,433	1,737	(1)	0	0
Copper wire, uninsulated	2,250	1,595	18,622	0	0	4,224
Paper for newspapers, magazines, and books	3,440	3,872	4,995	0	0	0
Other commodities	41,289	41,666	52,333	7,927	5,634	8,139
Total	532,082	541,962	625,732	193,956	184,987	215,742

[1] Less than $500.

Source: Direccion de Estadistica y Censos, *Comercio Exterior, Chile, 1962*, Santiago, 1963; Camara de Comercio, *Comercio Exterior, Chile, 1963-1964*, Santiago, 1964-65.

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